

**Effectiveness and Efficiency of the management information systems in the  
Judicial Authority and the Ministry of Justice**

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## Executive Summary

The justice, legal and judicial systems are on the top of the list of beneficiaries of the rapid progress in information and communication technology. The main principle for the use of information technology services in the legal and judicial system is built on considering the Ministry of Justice and the judiciary with their various subsidiaries as service providers, and that the citizens, governmental and local institutions and litigant parties as customers or beneficiaries that want to use these services. The developments of information technology and communication have helped the Ministry of Justice and the judiciary to achieve two main objectives:

- A. Provide services in an easy and simple administrative processes and procedures that are related to the judiciary, litigants and service seekers, while ensuring confidentiality and privacy.
- B. Activate the role of the supportive parties of the judiciary, and increase the efficiency of its performance in dealing with citizens and litigants (parties of cases).

Before introducing automation, information and communication technology in the judiciary work the procedures used to be done manually and traditionally through personal contact, they were dependent on the human resource to deliver announcements and notifications. Achieving this required interviewing the concerned persons or their representative to sign in receipt of the announcement or notification, and the absence of this contact or non- completion of the legal form is used as a major reason to justify requests for postponement in the courts, which directly affects the length of the case and the long trial time at the courts. Introducing the information technology caused a radical change in the culture of the implementation of the legal processes, and achieving justice for all. This was accompanied by an urgent need to change the approach and working procedures of the ministry and other bodies of the judiciary, in addition to the need to have the new technology of legislative and regulatory requirements.

The use of more advanced methods that are based on modern technology to deliver announcements or notifications directed to the litigants- parties of the case, is considered to have direct and effective impact in avoiding delays in trial and proceedings of cases, and thus achieve "prompt justice," where the time element is of great importance.

This study came in response to the request of the Directorate of Information Technology at the Ministry of Justice, and was implemented in cooperation and joint coordination between the Directorate's staff and the rule of law project IT specialists, which is funded by the U.S. Agency for International Development (USAID), the objectives of this study were to:

- A. Diagnose and document reality pre and post use of information systems at the Ministry of Justice and the courts in all aspects (infrastructure, operating systems, software, Al Mizan ... etc.).
- B. Monitor the development and updates that accompanied the work in the system from start to the present.
- C. Identify problems and challenges faced by the information system and implement solutions to solve problems and overcome challenges.
- D. Explore future prospects for the development of the system in the context of the rapid growth of information technology, and to keep track with the developments and updates in the judicial authority in light of the overall reform movement, which is taking place in Jordan, where the judiciary is at the top of its priorities legislatively and institutionally.

- E. Identify the trends of the workers in the field of information technology in the Ministry of Justice and outside of it so towards the development and modernization of the information system, and the needs and requirements to train and qualify the ministry staff in the field of information technology.
- F. Outline the annual implementation plan to reflect the suggestions and recommendations proposed by the study within a clear and defined timetable.

The study adapted a scientific methodology, in terms of resources of the official data, and of accuracy and consistency of its data, and also adapted a participatory approach and cooperated with all relevant authorities to ensure receiving the needed information and reports from various sources (programmers, assistant programmers, system analysts, technicians, data entry, maintenance workers and others). Based on this, the outline of the study was agreed on in terms of methodology and the contents of the study, which included:

Chapter I: Summary of organizational and methodological framework for the performance of the Directorate of Information Technology in the Ministry of Justice.

Chapter II: The infrastructure of information technology.

Chapter III: Operating systems, databases, programming language and software.

Chapter IV: Case Management (Mizan Program).

Chapter V: Human Resources of the Directorate of Information Technology.

A standardized questionnaire was used and distributed to all employees in the Directorate of Information Technology, where there are 102 employees in the ministry and the courts. The questionnaire aimed at identifying the problems and difficulties staff face in doing their jobs, and to identify their logistics and training needs, explore their plans, recommendations and aspirations for the future to improve performance and raise the quality level of services they provide in order to achieve the prompt justice.

The following are the main conclusions and recommendations of the study according to the following themes:

**First: Infrastructure of information technology:**

Before 2004, the Computer Department at the Ministry of Justice was supervising the computers, which included a number of personal computers and printers distributed over a number of offices in the ministry building and a limited number of courts. Its work was confined in secretarial and office work including printing books and official internal and external correspondence, as well as specific applications related to the financial and payroll systems and the human resources affairs.

In August of 2004 work started in the TOMOH Program to automate the courts and provide e-services in the field of legal and judicial work and prepare the legislative, administrative and technical infrastructure. The Directorate of Information Technology was established in the Ministry of Justice to undertake the task of moving all activities of the Ministry, the courts, the Judicial Institute and the Judicial Council from the traditional manual work to an automated system through establishing and sustaining the infrastructure and the automated systems and programs. Work in the field of infrastructure was on the following:

1. Providing the departments and sections in the courts and the Ministry of Justice with computers, the number of the computers in the courts increased from 641 computers to 3017, establishing a server room in each court and providing them with USP, two servers; a main and a backup. A main data center in the new Palace of Justice at Abdali, and a backup data center at the headquarters of the Ministry of Justice were built and equipped.
2. Connecting all courts of the Kingdom through a national network to the main data center and the Ministry of Justice. Installing telecommunication networks between all the courts, an electronic archiving system, electronic public query stations and using SMS for communications.
3. Providing maintenance services, technical support, troubleshooting, and solutions for application and operational problems related to information technology, preparing and processing software, upgrading the operating systems, testing the computers and accessories and monitoring their validity and expiry.
4. Re-engineering of courts processes: establishing a major computer center that includes a database of all courts' cases by using al Mizan System, which is considered the main system to the work of the courts and to register and follow the prosecution procedures from the moment of registration to the moment of separation from the Court of Cassation.
5. Providing the Directorate of Information Technology with qualifications and experiences, and providing workers with scientific skills through specialized training courses in various fields of maintenance, programming, and other networks.

**Main problems and challenges** facing the upgrade and development of infrastructure for information technology is in how to transition from just using the computer to record minutes and decisions and print them out, into a new phase based on electronic files instead of manual. In addition to some other challenges related to providing modern computers to meet the needs of work, and preparing the court buildings to accommodate modern technology. In addition to that there is a number of challenges including the following:

1. Providing human resources, expertise and ongoing training for all employees in the judiciary to be able to keep up with updates in the information systems and keep the positive interaction with electronic work instead of the manual.
2. Challenges related to updating the computers at the end of its useful life and replace them instead of maintenance, and inventory the old computers and replace them with modern ones, rather than bear the cost of maintenance or upgraded.
3. Challenges related to maintaining the confidentiality and security of information, and maintaining the information stored and not lost in the event of a technical malfunction of the computers.
4. Providing budgets for daily consumption of inks and equipment of the permanent challenges facing the Directorate of Information Technology, which needs permanent solutions and alternative ways to reduce and rationalize consumption.

**Main recommendations** in the field of modernization and development of infrastructure is the need to work on the preparation of a strategic plan for information technology at the level of the ministry and the courts that aims at upgrading and developing the infrastructure to be adapted to accommodate the new technology and providing technical professionals working in the courts. These include the following:

1. Providing and enhance the capacity of trained technicians to manage and support the servers, operating systems and used software, and dealing with the database to automate the courts programs Mizan Program and database management systems.
2. A mechanism to follow up the work of periodic maintenance and implementation of the necessary practical and scientific manner to reduce damages, problems, expanding and purchasing the unnecessary equipment, which increases the usual required costs.
3. Providing ongoing training programs for the staff of the Directorate of Information Technology in the ministry or in the courts to reduce the dependence on the ministry teams or the maintenance company that contracted annually.
4. Using electronic correspondences techniques, and reducing the use of paper, printing and using the physical resources such as computers and printers to reduce the rate and quantity of consumption.
5. Monitoring the special budgets dedicated to modernizing, developing and main taining the infrastructure of information technology to keep pace with the updates that occur to the information and communication systems.

## **Second: Operating systems, databases, programming language and software:**

### **1. Operating systems:**

The main technical services provided by the operating system are facilitating correspondence between the Ministry of Justice and the Judicial Council, where the majority of circulars, internal and external correspondence are done by e-mail. So, this way significantly limited the mechanism of using paper, where it saved a lot of time and effort in communication due to the adoption of e-mail and because of the availability of existing systems. The following are the major technical and service characteristics that are adopted by the operating system in the ministry and the courts:

1. The operating system provides the protection for each user where it gives limited powers to enter specific information according to the work requirements, and complies with the national policy for the security and protection of information. This policy applies to users, personal computers, main servers and internal network in the ministry and user accounts and e-mail, in addition to protecting the data by having a backup and others.
2. The operating system organizes user files on many storage media like the hard disk and CDROM. Each operating system depends on the file system for it. For example, most of the new Microsoft windows operating systems depend on the NTFS system.
3. The staff of the ministry solves problems or installs other operating systems, and there are no external contracts on operating systems, where all the existing contracts are internal.
4. The department of coordination and technical support in the ministry repair errors in operating systems systematically, according to official channels, the specialized companies discover the damage if it is out of the specialization and the work of the staff of the Directorate.
5. No need for external contracts in the field of operating systems due to the availability of good experiences in the Ministry of Justice, where the staff of the ministry received this task, so they equipped the required Virtual Machines by themselves, and worked on clustering or load balancing.

The main problems and challenges in the field of operation is the inability of the ministry to attract staff with academic qualifications and practical experience to work at the information technology sector and keep up with the developments and updates by training and qualifying the staff in the framework of the continuous training program for new and old employees. In addition to improving the financial competitive position of the staff in the job market to reduce staff drop-out to the private sector.

## **2. Databases:**

Since starting of automation of the courts, Oracle database was adopted to be the used database, where a developed main computer center design for this purpose contains modern technology. Six specialized servers in databases were secured, and each two servers one database by distributing the load supplied from Oracle Rack Company, thus there are three available highly effective databases. However, a high technology for not losing of data is used in the field of storage which is SAN Storage. The following are the most important characteristics of databases:

1. A special center was established in the ministry to be the main center for databases servers, and Linux is adopted as an operation system to run these servers, and an alternative computer center in case of damaging the main center, and giving wide properties to these servers with providing advanced storage media (SAN Storage). And distributing the load on these servers to ensure efficiency and speed in the query input.
2. The database in the Ministry of Justice consists of six databases including five in the main computer center (Mizan V2, Data Hub, MOJ CDB, NCRC and accounting) and one in the ministry (MOJ).
3. The Ministry of Justice has an annual contract of the main six computer centers. It contracted a local company with 10411 JD, while there is no maintenance contract for the alternative computer center because it is still under construction guarantee that will last for another two years and the annual costs is expected to increase when the guarantee ends to double with at least 20822 JD
4. The companies with maintenance contracts for databases solve all the problems that appear in the database systems. As the staff of the ministry has no experience in this area, in addition to that they are not ready to assume such responsibility.

**Main problems and challenges** facing the databases are resulting from the steady growth in the number of software programs and the size and type of data entered. The problem of storing the records and the reports in Mizan database is the biggest problem, which causes the database to increase in more than its original size in a percentage of 85% relative to if these documents stored in a specialized system of archiving from the beginning. In addition to that, there are many problems and challenges including the following:

1. Challenges related to developing and updating the databases to take advantage of the features of the new versions of Oracle, which gives additional capabilities needed such as the new Data Guard. But the stored data and its sub-programs may not be compatible with the new version, which leads to problems that may take long to be resolved. Despite the great desire for modernization, there are challenges related to how to deal with the great financial burden related to the maintenance and updating of databases.

2. Although there is no real risk in case all data was lost as it can be retrieved from the backup copies, the problem lies in stopping the courts work until problems are solved. If the problem is big, it takes many days, and so the real danger lies in stopping the judiciary's work for a certain period of time.
3. Challenges related to how to deal with databases, where the privacy of data users and beneficiaries is guaranteed, at the same time the issues related to information security are also kept.
4. Challenges on how to keep qualified staff in their jobs and improve their competitive position with other employees of the private sector.
5. Challenges related to the possibility of hiring staff with academic qualifications able to bear the burden, and this requires hiring technicians with relatively high salaries.

**Main recommendations** in the field of developing and updating of databases is to support the institutional capacity of the Ministry of Justice and the administration of the courts by training the staff and modernizing work systems in the courts. There are other recommendations related to databases, which are:

1. Introducing the electronic case management systems and train the staff to use it with re-engineering the procedures and documentation cycle of the case for the purpose of simplifying and speeding up the process of disposition of the cases.
2. Completing archiving the notary public offices in the implementation in Mizan program, despite the huge difficulties caused by the huge number of documents, which requires increasing the storage volume.
3. The need for the Ministry of Justice to qualify its staff by knowing what is new in technology by giving them training sessions from time to time, especially with regard to the management of databases.
4. Increasing the financial allocation for the development and maintenance of databases and installation.

### **3. Programming language and software:**

**3.1. Programming language:** Cobol language is in programming and MS FoxPro is the foundation stone for the entry and success of Oracle's programming language, which replaced the previous programming languages. The following are characteristics of a programming language after the automation system:

- In the area of security and protection, programming language adopted web programs to become essential in the ministry systems which necessitated the use of techniques such as encryption software, and connecting intermediates software security programs such as ISA, some secure designs were adopted in the software to become Multi Tier.
- The ministry is currently using a number of programming languages: Developer 2000, VB.Net, C #, JAVA, PHP, Flashes, Delphi, and MS SharePoint.
- VB.NET programming language is the most widely used languages, followed by Developer2000 language, where the ministry staff is versed in the Developer 2000. Regarding VB.net, most of the software where usually done by foreign companies, and its staff still has a limited capacity in it.



**3.2. Software:** great efforts began to automate the courts after the year of 2004 in collaboration with JAVA Company, where the result was establishing Mizan Program 1 system in VB6 programming language and Oracle database, which considered this system as a quantum leap in the courts. It is required to find a central electronic system allows the Ministry to retrieve centralized reports, in addition to providing a highly secure environment. So the program has been designed with the programming language VB.Net programming began in 2007 has been assigned to a local company set up this program. The following are the most important characteristics of software:

- the main characteristics of the software in the judicial system and in the Ministry of Justice is the presence of a centralized system to save data on a high level of security and controlled by security devices to prevent access to non-professionals and it is protected by automatic extinguish devices in the fire, Power Supply devices in cutting off the electricity, and special air conditions to keep the temperature of the devices.
- The ministry staff enjoys a great capacity in managing and developing the systems of the ministry, whether the administrative or financial ones and some court systems such as accounting, demarcation, secretariats and others. However, the inability of the required languages to develop the courts programs in Mizan Program and not being controlled limits their ability to fill the needs of the ministry.
- The software was designed to connect and interact with government institutions and other institutions such as the Bar Association, Civil Affairs and the Department of Lands and buildings. A special system was designed on the Internet to inquire which helps the public and lawyers to query without having to come to court.

The main problems and challenges in the field of programming language and software are in the ministry's ability to develop and keep up with software updates thereto, as well as the ability to deal with errors that occur on the system and processed. In addition to that, there are several challenges facing the development of future programming language and software summarized as follows:

1. The readiness of the ministry to provide the necessary budgets for developing the programming languages to keep up with updates and follow-up the maintenance, and self-reliance in cases of the external support of local companies and international projects stops.
2. The readiness of the ministry to attract qualified and competent staff in the field of information technology, programming language and programmers, especially that the large number of programming languages requires the availability of a different and many energies.
3. Providing training programs for the training and qualification of the staff of the ministry to build their capacity to manage the applicable regulations and to reduce the use of external expertise, motivating the employees financially and attracting specialized competencies in this area.
4. The ability of programmers to use the programming language for writing advanced reports supported by charts to help decision-makers make their decisions based on scientific facts and helps them to plan for the strategic development and modernization.
5. Physical and moral consequences of changing the programming language of the cost resulting from a change in the quality of services and equipment, in addition to the lack of qualified human staff to lead the work in the new language, and the lack of deep knowledge of the characteristics, benefits and advantages compared with existing languages.

6. The ability to review some of the laws to keep pace with modern electronic systems.
7. The ability to customize the budgets for investment in the field of automation and provide programmers who are able to implement and manage the phase, where the total cost increases of software and maintenance for the following reasons:
  - Lack of enough plans and studies before and during the design of the system, which requires many modifications to the system during and after implementation to meet the needs of the courts and departments.
  - The emergence of the need to connect with external organizations such as the Department of Lands, civil cases, lawyers and others with other systems like archiving and the accounting system and other, so it was needed to make substantial modifications to the system.
  - The lack of a uniform policy to connect with systems and institutions imposes new modifications on the software, and the insistence to connect with all the regulations and foreign institutions increased the demand for these modifications.
  - The lack of involvement of the Ministry in the technical supervision of these systems did not give an adequate opportunity to its programmers to be able to control, developing and updating the system. In fact, they were surprised by having a huge system where it is difficult to be used or updated.
  - The limited ability to develop Mizan system by one local company caused the ministry to bear high costs for the development of the program, especially with the reluctance of other companies to compete to do these developments, the reason for this could be their unwillingness to take risks in developing an unknown program to them and this made the ministry need for this company.
1. The lack of a strategic and clear vision for the future of Mizan system to cope with developments on the judiciary, especially in light of the increasing demands of the application of comprehensive reforms to this vital sector, specifically in the area of persecution to find the specialized courts and a constitutional and administrative court in two phases, and issues related to support the independence of the judiciary and others.
2. Not to carry out a comprehensive and periodic survey on the needs of users of data and information and the development of the system to meet these needs, noting that the need for such information and data grow and develop every day, both quantitatively and qualitatively to reach the appropriate speed.

**Main recommendations** in the field of programming language and software is related to the need to standardize programming languages and reduce their diversity and expansion because it creates a great burden on the ministry programmers in the case of the multiplicity and diversity of programming languages. Here are other recommendations in this area:

1. The need to work on creating a system of material and moral incentives for programmers and others to improve their competitive situation with programmers in the private sector to prevent attracting them to this sector. As well as attracting distinctive experiences through individual contracts.
2. Having continuous training programs reflecting their training needs in accordance with the nature of their work and keep up with recent developments on the software. Moreover, preparing and

training the staff at the Ministry of Justice to take over the management of software systems in particular and IT in general, to totally dispense on the companies' services and devolution of the required powers to them in terms of decision-making, policy-making, planning related to the process of development and modernization in the field of information technology.

3. Providing a common mechanism for linking with external institutions, each according to its competence and need to include the public security and the Ministry of Labor and monitoring companies and other institutions.
4. Providing an electronic system to provide more services to meet the needs of lawyers and the public, where they do not have to go to the courts for information that could not be found at in the end, this will save paper expenses, gasoline expenses, inks and reviewers pressure.
5. Covering the rest of the departments that have not been automated yet, such as: deposit and rents.
6. Monitoring adequate and sustainable budgets to development the software with the most modern programming languages.

### **Third: Case management (Mizan Program):**

Since the year 2000, where the courts were automated, meeting records were recorded handwritten by scribes, and was printed using Microsoft Word sometimes, where it took time and effort and reduces the number of sessions that can be achieved each day, and it is difficult to adjust the record if any error is discovered. Moreover, providing a copy of the record delays separating the cases in case of losing the record. Writing the cases was also done by hand and using carbon paper to copy, which consumes time and effort, especially in preparing large cases. Usually the registration of the name and the address is not clear which leads to the failure of notification because of these mistakes.

The process of developing and building the cases procedures management, which known as Mizan program, went through several stages spread over about ten years of work and experience in the final stage (the third), so they came up with a clear strategic vision to build a new version of the program (cases procedures management), named in Mizan program 2, to overcome all the problems faced by the implementation of cases procedures management. Mizan program has become a central database linking all the courts to each other and also connected with the relevant authorities such as Attorney General to exchange data on criminal proceedings, Ministry of Interior and Civil Affairs to exchange information for citizens, and Bar Association to exchange information for lawyers and others. The following are the major characteristics and advantages of the Mizan program 2:

#### **1. Recording of Cases:**

The registration process after the introduction of Mizan program to the courts became an easy, fast and accurate process at the same time, because it is easy to deal with Mizan's screens and speed of completion the work because of having more than one data entry, accuracy in data entry and the possibility of handling, because of having a reliable central database. Mizan program gave the following features to the judicial system:

- Strengthening the connections between the courts: connect all the courts in a central database via electronic communication lines, which facilitate the process of sending the case from one court to another.

- Reducing the storage space and working time: save storage space that was occupied by paper records, and register more than one case at the same time, which leads to increasing productivity of the court as soon as possible.
- Accuracy of the data: the data of the lawsuit parties including titles, national numbers and full names... etc became accurate because of having a reliable reference (database), and having Mizan Program which was used to limit official bodies in cases, as one of the cases parties to be classified into groups to facilitate add it and research on cases related to it.
- Unifying the records: the records were unified, where in each pen there is one sequence through Mizan program.

## **2. Query, search and retrieval of information:**

Query is through screens on Mizan program that contains all the information related to the case such as name, date of the original case, number and information the sessions for this case and the reasons for the postponement. The following are the major features that caused by the automation of the courts in the field of search and query and retrieval of information:

- Lawyers can inquire about their cases from the nearest site of their court without having to move.
- Providing a possibility for any citizen in any city to inquire about his case in the court nearest to the place of residence without going to the court where the case was recorded.
- Updating the public service through full-time staff to answer queries received from either lawyers or citizens, and special screens were established for direct query without the need for staff.
- Basic information of the case are registered in the pen and stored in more than one place and cannot be lost for any reason, and can be easily retrieved by the query or search.
- The information stored in Mizan System stored in a local server and in a main server in the data center, so this information cannot be canceled or deleted no matter what the circumstances.

There are a number of **recommendations to improve the areas of research, query and retrieval of information** are as follows:

1. The need to amend the legislation for the adoption of the legally binding electronic signature, so that the procedures of announcing the case are by a certified system between the judiciary and the lawyers of the other party. Moreover, providing electronic documents and exchanging them between lawyers' offices and a copy for the court, so it electronically measures the procedures of the view, data entry and sign it electronically.
2. Providing a set of electronic services for judges, the most important one is the base of knowledge management of judicial, legal principles, judgments which are a valuable tool for judges to facilitate their work and quick access to the required knowledge to make the appropriate decisions and judgments. And provide a set of services to manage their cases, meetings, judgments and tools to measure their performance.
3. The importance of the courts to provide the lawyers through the channels of the query a number of electronic services to help them in the follow-up cases related to their offices to see the agenda of their cases sessions, in addition to follow-up requests and their executions, this makes their procedures easier and saves time and effort in their work rather than visiting the courts.

4. Provide query services to the parties of the cases to see the related information to their cases through the stages of litigation.
5. Enabling administrators and decision-makers to follow-up the work of their departments and institutions by querying about the cases that are important to them and help them in their work, and provide them with statistics and performance indicators to help them make the appropriate decisions.

### **3. Transferring cases among the judges:**

After the implementing Mizan program, the process of transferring from a judge to another becomes the easiest process in the court which does not require any effort or time, where the cases are referred from a special screen in the system and appear on the screen "case file" in the query which makes it easier for all parties including Judges, the monitoring employee and reviewers.

### **4. Issuing reports:**

There are a large number of qualitative and quantitative indicators in Mizan Program that can be analyzed and retrieved. The program also provides a complete list of all kinds of reports needed by system users and beneficiaries of supported data by charts, where the analyst does not need a great effort just to run the database to complete the report whether it is daily, monthly or annually, as needed.

**Recommendation:** the sent reports issued by the information system achieve their objectives in supplying decision-makers in the Ministry and the Judicial Council with the correct data and information that will help them to plan and improve performance. It requires finding specialized parties or giving powers to the quality department in the courts to assume a unified reporting methodology and agreed on, it also requires training on methods of data analysis and writes conclusions and makes recommendations.

### **5. Notary Public Department:**

- The notary system is connected directly to the Civil Affairs system to make sure of the person coming to the department. The information entered on the system became very accurate, and the files are not accepted unless having the affairs card to insert the national number.
- The process for judicial warnings became more accurate and easier because of the accuracy of the information entered and the correct address.
- Completion the files is fast, smooth and without delay because one employee for it and it enter the data into the system can be done quickly.
- When querying about any information or file, it is entered the file number and the entered year, so all the required information appear, in addition to the possibility of finding the file form the system because it was saved in the archiving system at the department.

### **6. Powers and Protection and Security of information:**

Distributing the powers for each user, by dividing users into groups so that each group has certain powers and they can be modified. In addition to that, the program has the following features in the field of protecting the information security and distributing the powers:

- Each judge now has a list of printer/ printers or a following up record for only those who have the authority to look at, modify, print and follow up the cases with a certain judge.
- The user may have a partial powers on the same case like only to view it, where each characteristic has its own power (view, add, delete and modify).
- In Mizan Program, each user is added according to his group/ category, and is given a login name and password, to be added to the court that he works at and cannot see the other courts.
- After the end of the work of any user, whether the user ends the work or moves to another court or department, Mizan program cancels activating the user from a certain place to be activated from another place, or keeping it off or stopping it.

### **7. Censorship and follow-up:**

Censorship is divided into four sections, namely: censoring the work of judges, censoring the work of the staff, censoring the cases and the work of the courts.

- Censoring and following-up are available in Mizan program on the work of judges through the reports automatically calculated depending on the work of each judge and according to the dates specified on the system, which are issued on a monthly basis or by the entered date with full accuracy.
- The Censoring program on the supportive employees in the courts doesn't allow the follow-up writer to attend any case for any judge unless it is pre-determined by the Mizan screens, that it is used within a group following-up book.
- The censorship of the cases is done through Mizan Program and by having a report called lawsuit movements report, demanded when entering the case number which shows all the movements that have been on the case from the time of registering and entering the cases until the searching time. There is also another report called movements report is used as an administrative monitor in case we want to know all the users who have done a certain movement in general, through selecting the type of the movement and the location and type of court and the history of the movement can be chosen.
- Mizan Program issues all the reports on the work of the court, namely: the report of the court's agenda, the reports of the detailed statements for the cases and judges, coupes of the restriction statements (records). A report on the court's agenda can be issued monthly or annual of the retained, received and disposed cases.

### **8. Confidentiality of the cases:**

Mizan program distinguished the cases that need to be confidential and respect their privacy. When recording the secret case and save it to Mizan Program, the confidentiality of the cases should be chosen (Normal, confidential, minor) from the screen recording new case before starting entering the case data to be distinguished and not shown to the users.

### **9. Tracking files:**

Tracking files program aims at finding out the status of the case at this time or after it is disposed, and keep track of the file at its all statuses even in the storages in terms of the order, and in any shelf rack at all stages of the file during the case procedures.

#### **10. Administrative screens:**

The users in the administrative screens work of the service of Mizan in the Justice Department which is responsible for making amendments or changes to the data. They are not allowed to do any change, but after sending the form prepared for it (application form for amendments) and it is available in the courts, where it is filled by the one who asked for amendment, the details of the amendment should be mentioned and signed by the head of the court or the department that the user belongs to. Therefore, the head knows any modification, and he agrees or refuses, it is also known who made this amendment because the amendment will appear with the name of this person who made it.

#### **11. Crisis management:**

Mizan Program was designed to deal with crises related to power blackout, where it saves the work until the last minute of work on it by the user. Moreover, it could be through Mizan Program reserving the numbers that worked on manually (during the blackout) and completing the work on the program first.

#### **12. Departments for implementing the legal and criminal cases in Mizan Program:**

After entering the Mizan program in the work of the courts, it became very easy to follow up the executive cases and their procedures of the auctions, notifications, procedural requests and others. It significantly reduced the errors in procedures of implementation, and making it easy to avoid mistakes in the case they occur. Moreover, all the financial matters related to the case are calculated electronically.

**12.1. Civil issues:** the process of making decisions became automatic, the system is responsible for calculating the financial issues related to the case automatically, within the legal and mathematical equations that it is programmed accordingly. So, the procedures of implementation become automated administratively and financially and are easy, where the automated system was designed to help in the implementation of the executive writers to check the mistakes and do calculations. The link between the courts makes the registration process of the cases in the executive department a fast process.

**12.2. Criminal cases:** After the implementation of automation work, it became easy to follow the executive cases and their procedures, where all the actions of the notifications of the judgments and accounting the legal periods and print out the notifications and correspondence between the criminal notifications and the department of executive clear and organized procedures.

#### **The main problems and challenges faced by users of Mizan program is executive departments:**

1. Different abilities of workers at the executive departments, where some have great ability and skill in using the software and the properties that it offers, while others lack the ability to use the software or the knowledge of all its properties. This disparity is because of many of the executive department staff didn't get a sufficient training to use the program and its properties.

2. The lack of statisticians data analyst able to find the statistical data and qualitative information from a database in Mizan Program to meet the needs of decision-makers to help them in planning and put the polices, and help all users of the data of all job levels at the level of the judiciary, the Ministry of Justice, the audience of users and stakeholders. Taking into consideration that Mizan program includes thousands of quantitative and qualitative statistical indicators, which covers all aspects of judicial work, both in terms of the various levels of courts or at the level of departments and the Judicial Council and the Ministry of Justice.
3. Still there are many old cases are entered on the system. In some departments of implementing the rights, the automated system was used only at the beginning of the year 2012. Where the proportion of cases entered on the system doesn't exceed 1% so far from the number of the retained cases in court.

The recommendations for the development and modernization of the Mizan in the implementation departments can be summarized as follows:

1. Implementing a capacity building program for users of the program in execution departments to enable them to use it correctly and completely.
2. Working on the inserting information and data related to all the cases that still are not inserted on Mizan as soon as possible.
3. The need to unify the working procedures, including legal procedures in execution departments in all courts adhere to all departments of the courts.
4. Providing the appropriate staff and preparing the appropriate space and place for all of the information technology employees until working on the cases and follow them up on the system properly, and providing all the needs of the employee in a computer and a printer and a scanner ... Etc. before working on the system.

#### **Fourth: Human Resources of the Directorate of Information Technology:**

The number of the employees at the Directorate of Information Technology is 103 employees in addition to the Director of the Directorate, distributed to four departments. The vast majority of employees where they are 71% from the technical support technicians, 15% of programming specialists and technicians, 7% specialists in the field of infrastructure related to information technology and 7% of the field team on the maintenance and follow-up of Mizan program at the courts.

The staff of the Information Technology Directorate was distributed on the workplaces of them, where 30% are in the positions in the ministry center in the Department of Software Development, the Department of Infrastructure, the Department of Coordination and technical support. The rest of the staff in a percentage of 70% is distributed to the courts in different regions.

The following **are the major problems and challenges facing the human staff in the directorate:**

1. 70.2% of employees, their actual job title is technical support technicians, where their percentage in the structural does not exceed 36.2%. This means that 34% work in technical work not in their official jobs according to the structural and works outside of their specialization.



2. There is a surplus in programming and programmers assistants according to the structure, because half of the programmers and their assistants work in the field of technical support instead of programming.
3. The tasks and the job descriptions for the Directorate and its departments are not being developed and updated to keep pace with modern developments in the field of information technology and means of communication and software, in terms of training and qualifying the staff or in terms of attracting new specialized competencies.
4. There are described tasks in the service department of the courts that belongs to the directorate, and related to the technical support for Mizan program, carried out by employees from outside the directorate who is the liaison officer of policies and institutional development distributed in the courts, where they are about 91 employees carrying different certificates not related to the computer science, and they are not full-time in these tasks.
5. Lack of clarity of the tasks, authorities and functional responsibilities for some employees in the Directorate of Information Technology or employees of the courts, where the majority of them work outside their official duties the commissioned by the president of the court or any officials there, which negatively affects his official work and lost responsibilities if any errors occur.
6. The staff of the ministry in general and the staff of the Directorate of Information Technology lack an appropriate incentives system based on a realistic assessment of the employee performance, to meet with clear and defined objectives that are agreed on in advance.

**Recommendations to develop and improve the performance of the staff of the Directorate of Information Technology are:**

1. The need to review the functional tasks periodically according to the applied developments, changes and updates in information technology. The reviewing process includes studying the functional tasks that were working with during the year, or were not working with and find out the reasons.
2. Working on establishing a department or a specialized unit to supervise the mechanism of data entry and checking quality and accuracy manually and electronically periodically. Moreover, it analysis the data in-depth to find the statistical indicators that cannot be found but through specialists, which provides forward-looking and correlation information that are useful in medium and long term planning.
3. Working to put an end to a shortage of staff and stop the implementation of the functions described in the departments of the Directorate of Information Technology, and carried out by staff from outside the directorate, because the risks resulting from the lack of clarity of authorities and responsibilities in case of errors in the work.
4. The need to develop a system to reward the employee financially, who does work outside of the described tasks in his job after the approval of his supervisor.
5. Re-considering the objectives of the departments of the directorate to include the future vision and objectives for the head of the department.

## **CHAPTER ONE**

### **Summary of organizational and methodological framework for the performance of the Directorate of Information Technology in the Ministry of Justice**

#### **1. General background:**

This study comes in response to the request of the Directorate of Information Technology in the Ministry of Justice, and implemented in cooperation and coordination between the directorate staff and the specialist in information technology staff in the rule of the law project funded by the United State Agency for International development.

The main goal of this study is to diagnose and document the real fact before and after working with the information systems at the level of the Ministry of Justice and the courts from all aspects (infrastructure, operating systems, software, Al Mizan program ... etc.) in the Ministry of justice and in courts. As well as monitoring developments and updates that accompanied the work in the system since its inception till this day. And the study also targets diagnosing the problems and challenges which are faced by the Information system and the solutions that can be implemented to solve the problems and overcome the challenges, and exploring the future's prospects for the development of the system under the rapid growth of the information technology, and to keep up with the developments and updates in the judiciary in the light of the overall reform movement which is taking place in Jordan, at the top of which is the judiciary both the legislative and institutional. The study aimed at the two following sub-objectives:

1. Identifying the workers' trends in the field of the information technology within and outside the Ministry of Justice towards the development and modernization of information system, and the needs and requirements and qualification of the human staff that is working in the field of information technology in the ministry.
2. Outline the annual operational plan, which reflects the ground proposals and recommendations that the study reached with a clear and thoughtful timetable.

The study was adopted a scientific methodology, both in terms of the official data sources, or in terms of accuracy and consistency of data. It was pursuing the principle of participation and cooperation with all relevant authorities while preparing the study by providing the report authors by information and reports from various disciplines (programmers, and assistant's programmers, systems analysts, and technicians, and Portal data, and global maintenance.. and others). The outlines of the study were agreed on in terms of the methodology and the content of the study, which included a diagnosis of reality before starting the work on automation of the system and after the process of automation at the level of the Ministry of Justice and the level of the courts of the kingdom on a various levels.

The human resources in the information technology sector in the ministry and the court was addressed in terms of the organizational structure of the Directorate of Information Technology and the functions of the Directorate, the objectives of each department and job descriptions for the staff in each department and identify the gap between the declared official job tasks and the actual practice by staff on the ground. A standardized questionnaire was used and distributed on the employees in the Directorate of Information Technology; the number of employees in the ministry and the courts is 102 employees. The questionnaire

aimed to identify the problems and the difficulties the employees face while doing their job, and to identify their logistics needs, training needs, foreseeing plans, aspirations and recommendations for the future to improve the performance and raise the level of services provided in order to achieve a prompt justice.

### **3. The methodological and regulatory/ organizational framework of the Directorate of Information Technology:**

The Directorate of Information Technology identified the main objectives of the methodology for its work before starting the automation of the courts, specifically in the year 2004 where it began its first applications in the Palace of Justice. And the preparation of the initial version of the system scales (1.6), the application of the system implemented during the years 2006-2007 in most of the kingdom courts. The Ministry of Justice identified the main objectives of the information system as follows:

1. Re-engineer procedures to increase efficiency, effectiveness and transparency.
2. Automate the courts to increase the accuracy and quality of data, and improve the level of services.
3. Provide supervision, control and electronics control tools to reduce the possibility of corruption and increase the degree of administrative responsibilities.
4. Speed up the procedures, eliminating the need to repeat the implementation of the action by participating in the data entered in more than one location.

Accordingly, a target group has been identified in the automated Jordanian court system on the different levels, The Department of Public Prosecution, The Department of Civil and Criminal Enforcement, and Notary Public Services.

In order to achieve the IT objectives and to ensure the effectiveness of their use the following must be worked on and focused on:

1. The assurance of the validity of the data and the formal approval of its source.
2. Ensure the confidentiality of data, and its security against access by third parties.
3. The protection of the means of communication from any effects or unlawful interference to ensure that no information is displayed during its transfer.
4. Data transfers must be represented by some sort of documentation for the purpose of non-denial on the part of the receiving party.
5. Easy access to data and knowledge and full understanding of the parties concerned.
6. In order to use modern technological methods in the judiciary, the matter requires the provision of an infrastructure of laws and legislation for the adoption of these methods and the provision of legal protection, and requires that:
  1. Keep up with some of the legislation's legal development in the area of information and communication technology, which requires amending the legislation to conform to the requirements of the application of technology.
  2. The dissemination of information and technological culture among judicial organs and the citizens and the parties to cases generally by enlightening seminars on the role of information technology in support of judicial systems.
  3. Re-engineering of business processes and re-design and standardization of many of the models used to comply with the requirements of the provision of electronic services.
  4. Establish security standards for the use of technology, as this is an important approach to electronic delivery systems, including security systems and providing data and ensuring the privacy of individuals.

Some of the objectives that were achieved in the Directorate of Information Technology are:

### **1. Re-engineering of court processes:**

To perform this task have been working on the provision of infrastructure and modify court procedures commensurate with the automation system that fits in this context have been working on the following:

- Installing additional monitors in all of the court rooms and public prosecution department to enable the judges, lawyers and the litigants to pursue what's logging in the aphid records which increases transparency and speed the preparation of the records and its accuracy.
- Using the systems to organizing the role of notary service, implementation and accounting departments.
- Provide the possibility of converting the issues of public prosecution department to courts, as well as from court to another court and the withdrawal of all the evidence electronically and what cases the nature of work.
- The use of automatic system to prepare, send and receive the notification between the court and the partners.
- Installing teleconference systems in the juvenile courts.
- Installing of an electronic query stations (Kiosks) to the public in all first instance courts.
- Using short mobile messages (SMS) to help in the judicial notification.
- Distributing the cases to judges automatically and randomly.

And to implement the automation of courts procedures, the ministry built a major main computer center that includes the database of all courts' cases through implementing of a Mizan system, which is considered as the main system in the courts work and to register and follow up with litigation procedures from the moment of registration to the moment of separation from the court of cassation. And to complete the automation of the courts, the following things were implemented:

- Building a network between all the courts which is to exchange data and to store it in the main computer center.
- Application of the electronic archiving system to cover all the courts work, and to access the full electronic file.
- Application of the implementation system to the public prosecution departments.
- Application of the implementation system of civil issues.
- Application of the notary system.

### **2. Automation of the judicial administration:**

Complementing the implementation plans of the ministry's aimed at elevating the level of performance of the judiciary and the courts services, speed up litigation procedures, and to save time and effort on all parties which would raise efficiency, effectiveness and make it easier for citizens, lawyers and all of the litigation process sides and parties, the ministry built a main computer center at the ministry which connect and link all the courts through a network that had been prepared to this purpose according to best international specifications and standards. It also prepared one consolidated and unified version of software to automate the proceeding of litigation and the work of the public prosecution departments, as follows:

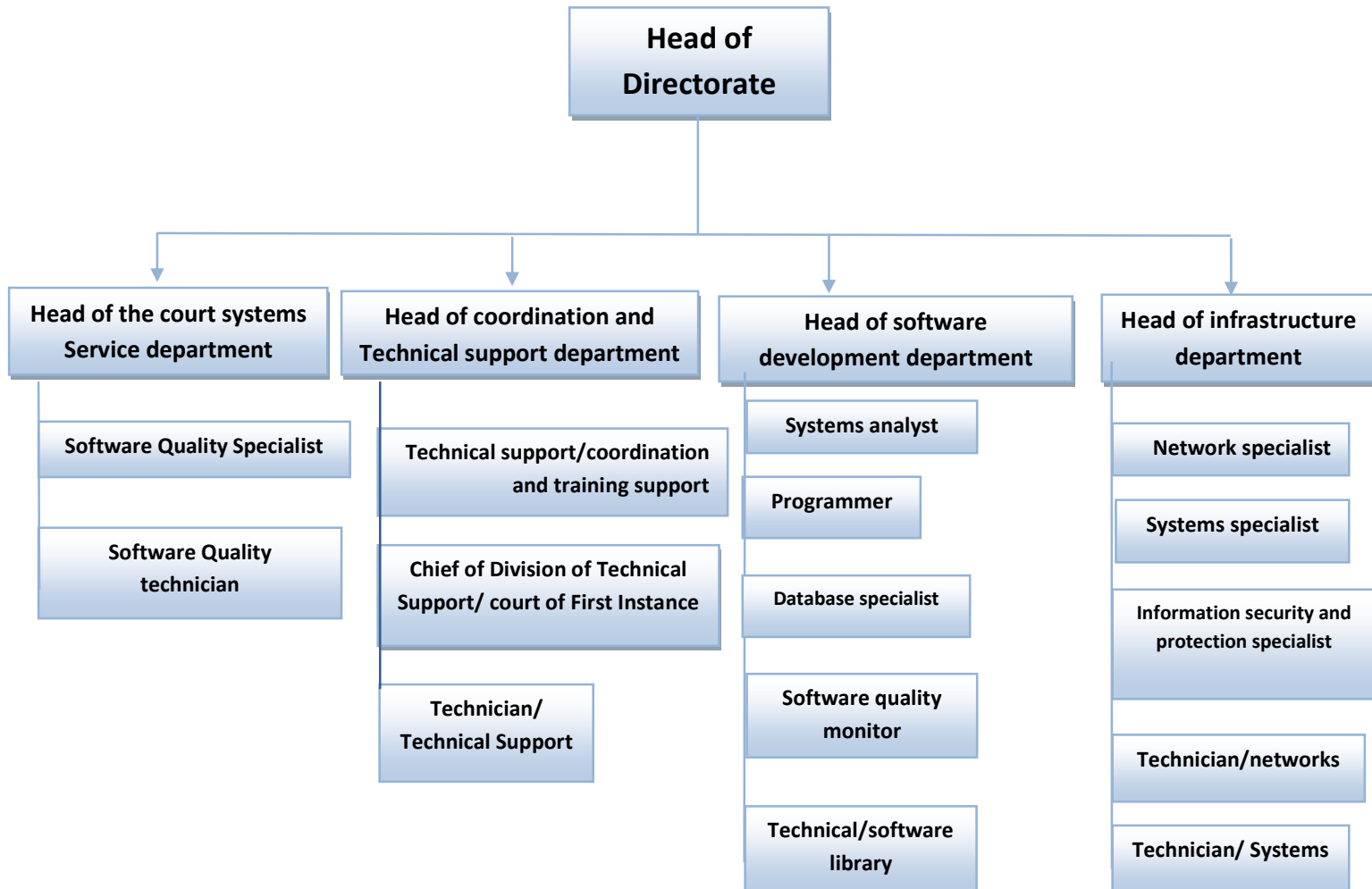
- Prepare a unified version of the automation of court proceedings in all the courts (Mizan2) which has been fully implemented in a centralized way by the ministry's main computer center, and has been implemented in all the first instance courts and all the conciliation' courts.
- Prepare a unified version of the automation of work and procedures of the public prosecution departments, which has been fully implemented in all public prosecution departments.
- Work on developing the court systems which are still using the old automated system of judge procedures (Mizan 1): the court of first instance and the resumption of customs, the court of state property, the court of appeal of income tax, special labor court, juvenile courts, mediation department, the department of civil public prosecutor, and department of the Attorney General.
- Integrating the various court systems in a unified system to facilitate the exchange of information, extract the comparable statistics and training all the judges and the administrators in the courts and the ministry on the system to maximize the benefits of the Information Management System, the data and statistics which is provided by the system.
- Installation of screens for lawyers and litigants in the halls to inform the lawyers, litigants, witnesses and experts about what's written according to what they said in the records of meetings.
- Adopting the report service via mobile messages and e-mail through the e-government project.
- Provide the infrastructure, the necessary equipment and computers for the courts, judges and the students of Institute of Judicial.
- Completing of a national telecommunication network for all the courts in the kingdom (except conciliation' courts Jaffer, Rowaished and blue because the telecommunication company can't provide them with service) which is used to exchange data and data storage for issues main database.
- Preparing a main computer center featuring the latest technology devices and databases, and preparing a centralized database to collect the courts data to extract general and specific statistical reports.
- Insert the ministry of justice in the current secure government network phase, which will allow the ministry to exchange data with other government departments such as the Department of Public Security, the Department of Civil Affairs and the Department of Lands and Survey and others.
- Send a short mobile message to remind gentlemen lawyers of their meetings dates in the courts and this process will continue in cooperation with the Ministry of Communication and Information Technology.
- The "not condemned" Certificates electronic issuing service will start in collaboration with the Ministry of Communication and Information Technology and the Directorate of Public Security, which will make it faster and easier procedures for citizens.
- Participating in the national committee for the Information security, which developed a set of policies and procedures which will be implemented in all over the kingdom in the public and private sectors to protect the electronic information.
- With cooperation with the rule of law project funded by the US Agency for International Development (USAID) in addition to the United Nations Development Programme (UNDP), a library was created in the courts of first instance, and the libraries in the Palace of Justice were automated in Amman, Irbid, first instance of Zarqa and the Library of Judicial Institute according to the latest automated systems.

- Working on transferring some of the Ministry services to e-services, with putting the forms that might be needed by the recipient of the service on the Ministry website to make it easier for them, as well as providing employment applications.
- Buying electronic archiving system, and implementing it in the ministry and courts.
- Automate many of the systems, including the following: the judicial inspection system. Financial disclosure system.

The organizational structure of the Directorate of Information Technology (Information Systems Management) consist of four sections and each section is followed by a number of staff from different competence and each one is charged with work according to their officially approved functional description, which is as follow:

1. Department of Infrastructure and this department involve a number of professional technicians from different disciplines related to computer networks, and system, security and information protection specialist.
2. Department of software development and this department involve system analysts and specialists in databases, software programming and quality control.
3. Department of coordination and technical support and this department involve technicians in maintenance and training.
4. Department of courts system service and this department involve technicians in software programming.

**Organizational structure of the Directorate of  
Information Technology**



## **CHAPTER TWO**

### **The infrastructure of the information technology in the Ministry of Justice and Judicial Authority**

#### **First: diagnosing the reality of the infrastructure before automation.**

Before the year of 2004, The Computer Science Department at the Ministry of Justice monitors the computers, which included a number of personal computers and printers distributed over a number of offices in the ministry building and a limited number of courts. Its work was limited in secretarial and office work of printing books and official internal and external correspondences, which belong to the ministry as well as some applications for financial and salary system and employee affairs, where there was no mechanism or study or plan for the development and use of technology at work.

The Ministry of Justice at the level of the courts started to work on a program for the automation of office work in the courts. It is by providing judges with computers and printers to print records, decisions and judicial judgments, and printing the other internal and external official correspondence using Word Processing System. Moreover, a few programs of Fox Pro database have been developed in order to automate the registration of certain types of the necessary and urgent lawsuits. Moreover, one or two of small Local Area Network have been established to enable access to the database. The reality of information and communication technology and challenges in the period before automation which is before 2004 can be seen from the following angles:

#### **1. Provide technical support service:**

Technical support is the services provided to users to address the problems faced by traders with computers and various devices. The Computer Science Department at the Ministry of Justice provides technical support to the Ministry and the courts of the Kingdom, where the department consisted of six employees and the head of the department to monitor their work. They provide technical support for all computers and printers in the Ministry of Justice and the courts of the Kingdom, and he supervises 17 employees of IT specialist's distributors to the courts of the Kingdom where they provide technical support to the courts in different locations of the kingdom. Moreover, it provides support for desktop office program (printing, tables) of the computers used by the staff of the ministry.

There was no any server at the Justice Department at the time or the process of keeping a centralized data and information, so each employee is responsible for protecting the documents on his/her computer and providing electronic backup copies. Generally, the work of the Computer Science Department at the ministry is limited in the following works:

- Solving practical and operational problems related to information technology by providing assistance and guidance to all staff of the ministry whenever it is necessary.
- Creating and processing the limited potentials software, and computers to the ministry staff.
- Installing IT systems and updating information for all staff of the ministry.
- Updating the operating system and software on a regular basis.



- Knowledge of the latest developments in the field of information technology in the work market relevant to the needs and requirements of the ministry, and then providing the purchases Departments of the latest modern computers and its accessories.
- Ensuring that the property rights of applied programs in computers while keeping a record of all licenses of these programs.

The Ministry of Justice has chosen 17 employees of court employees to provide technical support to the courts, where six of them are in the new Palace of Justice in Amman, four are in other courts of Amman, and seven were distributed in the courts in different locations.

## **2. Computer Department staff skills:**

Due to the lack of use of technology and the devices, and the limit of their functions and use and the lack of an integrated information system in the ministry, the skills of the technical support staff in the Department of Computer adequate and commensurate with the technical devices available in the ministry. At the level of the courts, the majority of technical support staff were selected from within the administrative staff in the courts, who have the background or skills related to automation. Also, their job includes addressing the problems related to computers and office software and providing a limited support in the field of automated applications (support for Fox Pro database).

The technical support staff at this stage was not trained enough, where they always depended on maintenance contracts and companies responsible for this. This was considered one of the challenges faced the ministry.

## **3. Financial allocations:**

There were not special needs of the Department of Computer at the time; also there were not official financial allocations for this department, where the requirements were linked to the departments that include computers and equipment.

## **4. The expected growth:**

Due to the remarkable development of information and communication technology in all walks of life, whether personal or professional, the era of information and communication technology began to take its way in all areas of work. So become a process of development and modernization is imperative, as a result of the complexity and the complexity of business, leading to increased demand for the quantity and quality of information. It has considered all departments and divisions in the ministry need to introduce information and communication technology at the heart of its work, automatically led to increased demand for computers and accessories, thus increasing the demand for programs and software in most circles.

Natural growth of demand for computers and their accessories also led to increasing the workload on the staff of the Computer Science Department, which required increasing the number of employees in terms of the number and diversity of specializations in terms of the type. All of this led to automatically increasing the financial allocations to support the department as a result of increasing the annual and maintenance contracts.

## 5. External contracts and maintenance:

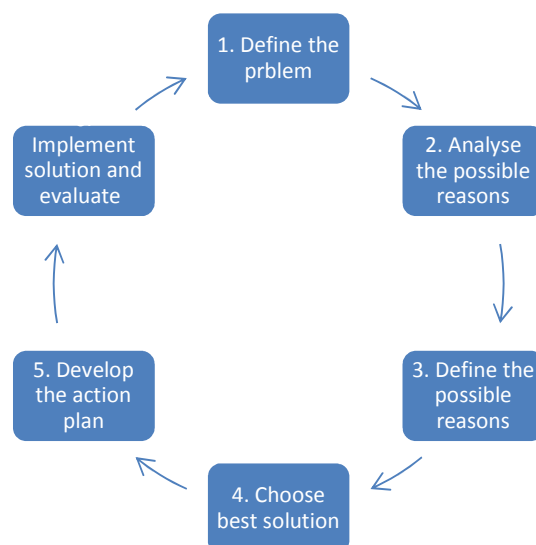
The external contracts that have been signed with the Ministry of Justice were distributed on the companies which offer the appropriate parts availability of devices and equipment used in all courts of the Kingdom. Maintaining the computers and the equipment in the courts was through technical support teams in most of the courts of first instance, where each technical support team in the courts of first instance was in charge of maintenance and technical support for the computers and equipment in the court. All the reconciliation courts that belong to the court of first instance and if necessary to external support by companies that are contracted with. A request is sent to the employee of the technical support in the ministry, and then the employee coordinates with the maintenance company that sends a representative from the company to the court to fix and solve the problem.

## 6. Crisis management and problem solving:

The definition of the problem or the crisis is a emergent defect which shuts down the computers and the main components of a computer or other electronic devices, and the crisis is the final result of the accumulation of a series of cascading and successive problems that causes a major and a clear threat for the workflow. The following are the type of problems and crises that were occurring in that period; their causes and problem-solving mechanism (see the diagram):

- Using computers, equipment incorrectly may stop the computers or lead to its damage and damaging some parts of them.
- Not keeping the computers from being destroyed and misused by others.
- Non-technical following-up periodically and continuously of the computers and the devices to ensure and reduce breakdowns and problems.
- Lacking the possibilities to replace malfunctioning equipment with backup equipment used when needed to ensure the continuity of the work normally.

**Diagram of the sequence of the Computer Department work in dealing with crises and problems in the computers and their accessories**



## 7. Cost of purchasing:

The purpose of using technology was limited and there was no clear vision of the Ministry of Justice in how to use technology in conducting and facilitating the daily work of the staff the ministry and the courts, and there was no actual budget for this sector due to the absence of a plan to buy computers for the future, where the procurement depended on buying devices to remove the broken ones with new according to the need of the other departments. Contracting with companies was limited only to provide spare parts for the computers and equipment.

## 8. Computer networks:

Ministry of Justice guaranteed at that period one local network works on servicing and sharing data and resources for simple administrative systems, relating to personnel and financial department only. Computer networks were not available in the courts until the beginning of 2004, and the computers were used by judges' printers to print the records and decisions and what is related to the work of the judge, and unforeseen cases and not connected to any other computers.

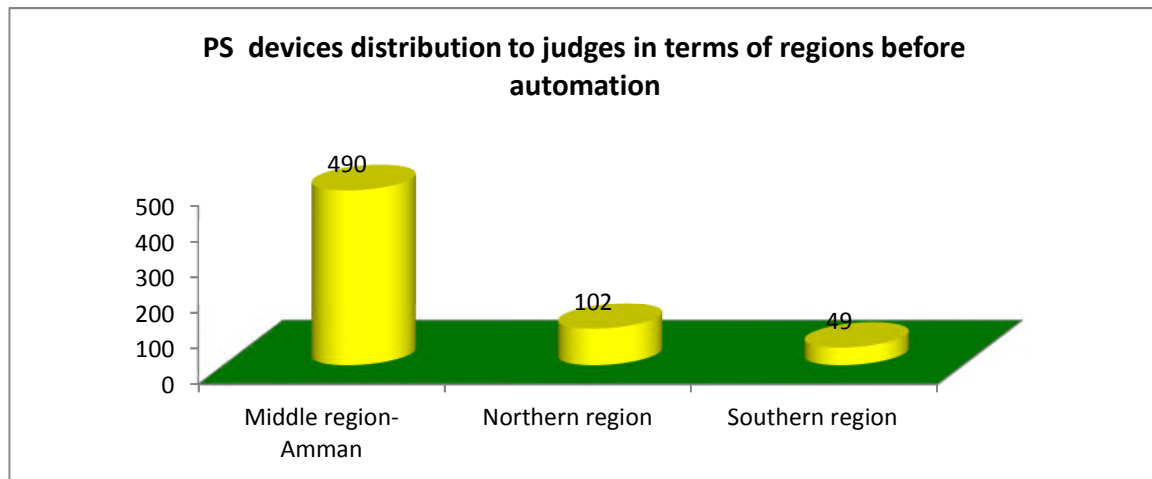
## 9. Computers and equipment:

Computers were used only in the courts by judges and some writers and offices in order to print records and decisions, where the Ministry of Justice allocated a competent officer for almost every judge specialized in printing, a computer and a printer, where each computer was provided with Micro Soft Word Program. It is used for word processing to print records of interrogations and reports. Servers to keep files were not available, where each employee was responsible for the protection of the documents on his computer and provide backup electronic copies to provide losing or damaging the documents and data. The following table shows that the computers in the courts reached 641 computers.

**Numbers of computers in the courts before start of the process of automation in 2004, according to the computer type and location of the court**

Courts (English)	Courts (Arabic)	PC	Courts (English)	Courts(Arabic)	PC
NPOJ	قصر العدل	225	Muwaqqar	الموقر	1
MOJ	وزارة العدل	50	Custom	الجمارك - عمان	4
East Amman	شرق عمان	19	Sahab	سحاب	5
West Amman	غرب عمان	25	Naour	ناعور	2
North Amman	شمال عمان	22	Water & Land	الاراضي والمياه	0
South Amman	جنوب عمان	24	Ein AL Basha	عين الباشا	4
Income Tax	ضريبة الدخل	6	Judicial Institute	المعهد القضائي	10
Jeeza	الجيزة	2	Criminal Court	الجنايات الكبرى	22
Amman Juvenile	احداث عمان	0			
Aqaba	بداية العقبة	10	Quweirah	القويرة	1
Ajloun	عجلون	10			
Jerash	جرش	9			
Irbid Palace	قصر عدل اربد	61	Bani Obeid	بني عبيد	0
Al Ramtha	الرمثا	4	North Ghor	الاغوار الشمالية	2
Irbid Juvenile	احداث اربد	0	North Mazar	المزار الشمالي	1
Koura	الكورة	2	Taybeh	الطيبة	1

Irbid Pros	مدعي عام اربد	2	Wasatiyyeh	الوسطية	0
Bani Kenana	بني كنانة	2			
Karak Palace	قصر عدل الكرك	12	Safi Ghor	غور الصافي	2
South Mazar	المزار الجنوبي	2	Faqou	فقوع	0
Al Qaser	القصر	1	Ai	عي	0
Maan Palace	قصر معان	10	Jaffer	الجفر	0
Al Husseiniyyah	الحسينية	1	Petra	البتراء وادي موسى	1
Al Shobak	الشوبك	1			
Madaba	مادبا	7	Theiban	ذيبان	1
Mafrq	المفرق	7	Rowaished	الرويشد	1
North Badia	البادية الشمالية	0			
Salt Palace	السلط	14	Deir Alla	دير علا	2
South Shouneh	الشونة الجنوبية	3			
Tafilah	الطفيلة	8	Bseira	بصيرا	0
Al Hasa	الحسا	0			
Zarqa	الزرقاء	34	AL Azraq	الازرق	1
Zarqa Juvenile	أحداث الزرقاء	0	Al Russeifah	الرصيفة	7
<b>Total</b>	<b>المجموع</b>	<b>641</b>			



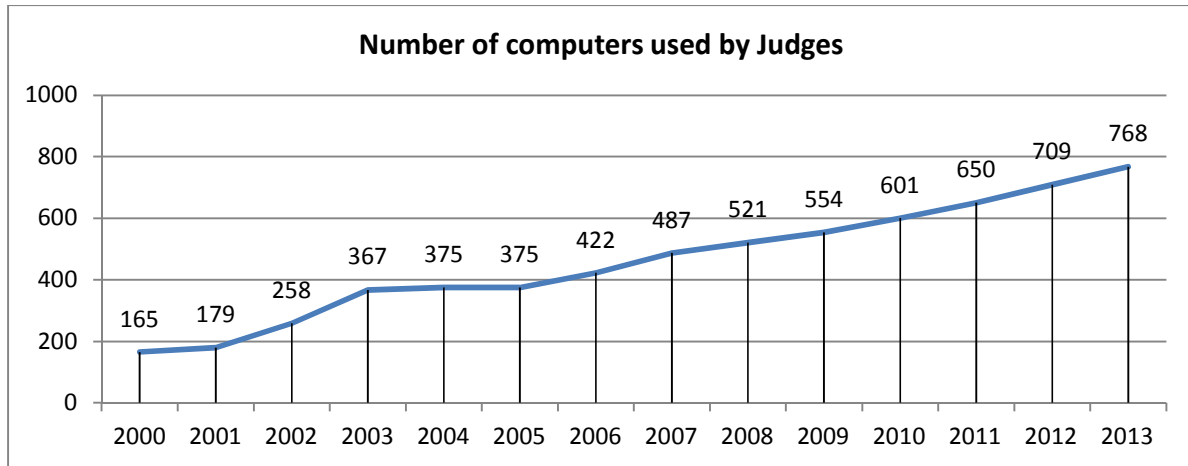
#### 10. Training courses:

The training courses on developing the skills of technical support staff in the courts were few, where most of the plans didn't include developing the technical support staff and develop their potential, but it concentrated on other departments such as programming, networking and infrastructure in preparation for the new automation project, which is represented in Mizan program which is for case management in the courts.

#### 11. Continuous and expected development in the future:

Due to the annual and continues increase in the number of received cases by the courts, it was accompanied with a steady increase in the number of judges and supportive staff as assistants to the judges. Thus, the needed number by the new judges of demanding computers and accessories increases.

This causes new challenges to the ministry, especially in the growing of financial burden and increasing the value of annual and maintenance contracts.



## **Second: Diagnosing the reality of the infrastructure after automation.**

The Directorate of Information Technology at the Ministry of Justice and its departments as well as its crew was established (see the matrix of the objectives and tasks of the Directorate in the Appendix). Work began in August of 2004 on TOMOH (Ambition) Program by Masag Project, which aims at providing the technical support to the Ministry of Justice, and developing a program for case management and implementing it at all of the levels of courts distributed in 73 locations during a short period of time equivalent to three years.

Nine years after the beginning of the project, MIZAN Version 2 Project for case management has become applicable in all courts of the Kingdom of different degrees. The number of computers in the courts increased from 641 to 3017 computers, and rooms were prepared for Server in each court and provided with USP and two servers, one is the major and the other is a backup. The main data center was established in the new Palace of Justice in Al- Abdali and alternative main data center at the headquarters of the Ministry of Justice. All of the courts are connected with the main center through a national network linking all the courts of the Kingdom with the main data center and the Ministry of Justice. Moreover, the Ministry of Justice was linked to the Secure Government Network (SGN), and it made it possible to provide cases data to all ministries and government departments related to the safe network. The following are the characteristics of this stage:

### **1. Computers and equipments :**

#### **1.1.Computers and equipment in the main data center in the Palace of Justice:**

The main data center is located at the second floor of the Palace of Justice and consists of two rooms, one is an operating room and the other is an equipment room, where the data center administrator supervises the continuity of computers work, and performs the necessary maintenance and follow-up with companies that provide maintenance for these computers. The data center contains sophisticated equipment and high - tech used to provide electronic services to users of Mizan Program in the courts and systems related to other ministries departments, including the Amman Department of the territory and the Ministry of Water. The main data center was designed in a way to ensure business continuity in the cases of any failure in

any of its parts. Moreover, the Ministry of Justice is currently working on preparing the alternative data center to be an alternative in the case of any natural disaster or interruption in service happen in the main data center. The following table shows the type and number of computers available.

The data center is the main nerve of Mizan system, where it saves the lawsuits data from all courts and without it cannot be worked on the system, so it is crucial to maintain the continuity of its work. The equipment of the data centre was bought in different periods leading to different period's insurance for the computers and equipment. In order to keep the continuity of the work of the Centre, maintenance annual contracts were signed with the suppliers to ensure repairing the errors in these computers after the end of the warranty period of the industry.

#### **Distribution of computers and equipments by type and their quantity in the main data center at the Palace of Justice.**

Qty	The device's name in English	The device's name in Arabic
23	Servers	سيرفر
5	UPS	جهاز حفظ الطاقة
1	core switch	جهاز شبكة رئيسي
14	Switch	جهاز شبكة فرعي
3	Firewall	جهاز حماية من الاختراق الخارجي
16	Storage Device	جهاز حفظ البيانات
2	AC And control the heat	جهاز تكييف وسيطرة على الحرارة
1	Room environment control devices	أجهزة مراقبة لبيئة الغرفة
1	Diagnostic system and fire extinguishers	نظام تشخيص وإطفاء الحرائق
8	Rack Cabinet	حامل سيرفرات

#### **1.2. Computers and equipment in the courts:**

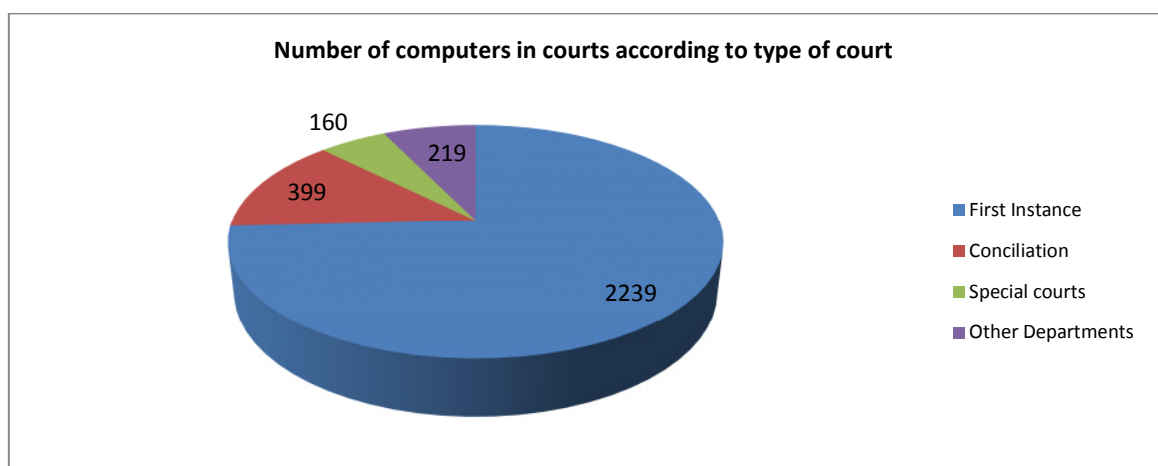
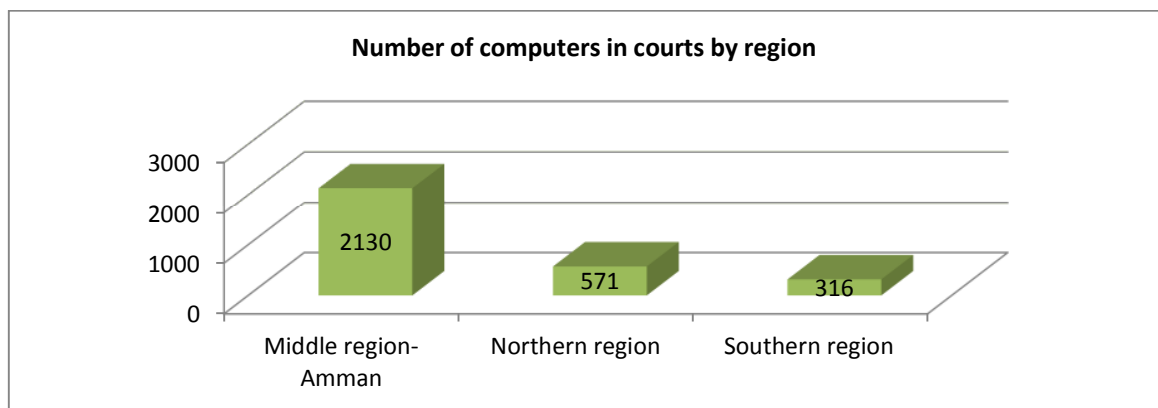
The needs of the courts of the main network server were classified based on the size and number of court staff, where courts were classified into three types:

- Big- size courts: palaces of justice and the courts, whose employs are more than 25 judges.
- Medium- size courts: whose staff is 25 judges or less.
- Small-sized courts: whose employs are less than 10 judges.

Based on the classification of the court, it is prepared with the necessary equipment in terms of the server room and the quality and size of the main server. There are currently a total of 57 courts building that are linked to the national network, where Mizan Program is used in all these courts. There is also in the Palace of Justice 4 servers used for the database and MS Active Directory, and receiving the copied data from the database servers in Mizan Program in the courts. The total number of computers in all courts was 3017 computers. The table below shows that the percentage of the number of computers in the central governorates is 70.6% of the total of the computers, and the percentage in the northern governorates is 18.9% and 10.5 % in the southern governorates. In this context, it has been working on the following:

- 1- Providing the Palace of Justice with 300 computers and 200 printers.

- 2- Establishing and preparing two laboratories for training with a capacity of 17 and 23 computers. The project began to be implemented of the training in the largest site of the Jordanian courts, which is the new Palace of Justice in Amman. This place includes the Reconciliation Court, Court of First Instance, the Court of Appeal, the National Court of Cassation and the Supreme Court of Justice. It also includes public prosecution offices, the administrative prosecution and the Public Prosecution and the Judicial Council.
- 3- A Local Area Network was established when Masaq Project started in order to connect and link all the computers in the new Palace of Justice building.
- 4- The Ministry of Justice provided the Palace of Justice with a few hundred additional computers that were put in the courtrooms and administrative offices.
- 5- Establishing a safe room to install the server and inserting an application for the case management called Mizan, which is developed by Java Net company, it is a private company for information technology services. Mizan Program adopts a similar program that has been successfully implemented in the West Bank .
- 6- Masaq project has implemented the required training courses. Moreover, Mizan Program was implemented in the Reconciliation Courts, the First Instance and Appeals courts in late of the year 2004 and early in 2005.



**Distribution of the number of current computers in the courts after the automation process according to the court**

Courts (English )	Courts( Arabic )	QTY	Courts (English )	Courts( Arabic )	QTY
NPOJ	قصر العدل	800	Muwaqqar	الموقر	11
MOJ	وزارة العدل	188	Custom	جمارك عمان	41
East Amman	شرق عمان	109	Sahab	سحاب	29
West Amman	غرب عمان	100	Naour	ناعور	15
North Amman	شمال عمان	145	Water & Land	الاراضي والمياة	15
South Amman	جنوب عمان	101	Ein AL Basha	عين الباشا	21
Income Tax	ضريبة الدخل	33	Judicial Institute	المعهد القضائي	31
Jeeza	الجيزة	19	Criminal Court	الجنايات الكبرى	59
Juvenile	أحداث عمان	5			
Aqaba	العقبة	42	Quweirah	القويرة	7
Ajloun	عجلون	70			
Jerash	جرش	72			
Irbid Palace	قصر اربد	170	Bani Obeid	بني عبید	16
Al Ramtha	الرمثا	24	North Ghor	الاغوار الشمالية	19
Irbid Juvenile	احداث اربد	3	North Mazar	المزار الشمالي	8
Koura	الكورة	12	Al Taybeh	الطيبة	0
Irbid Public Pros	مدعي عام اربد	48	AL Wasatiyyeh	الوسطية	5
Bani Kenana	بني كنانة	14			
Karak Palace	قصر العدل الكرك	76	Safi Ghor	غور الصافي	10
South Mazar	المزار الجنوبي	14	Faqou	فقوع	6
Al Qaser	القصر	11	Ai	عي	7
Maan Palace	قصر معان	54	AL Jaffer	الجفر	5
Al Husseinayah	الحسينية	5	Petra	البتراء / وادي موسى	10
Al Shobak	الشوبك	8			
Madaba	مادبا	53	Theban	ذبيان	9
Mafraq	المفرق	93	AL Rowaished	الرويشد	8
North Badia	البادية الشمالية	9			
Salt Palace	السلط	92	Deir Alla	دير علا	14
South Shouneh	الشونة الجنوبية	18			
Tafilah	الطفيلة	48	Bseira	بصيرا	7
AL Hasa	الحسا	6			
Zarqa	الزرقاء	166	AL Azraq	الأزرق	9
Zarqa Juvenile	أحداث الزرقاء	4	Al Russeifah	الرصيف	43
<b>Total</b>	<b>المجموع</b>	<b>3017</b>			

**2. Providing technical support service:**



Technical support is the technical processing for the computers and the equipment at the stage of modernization and development and resolving the crises and problems users face with the computer (or sites) in a high efficiency and profession that requires creativity. The following is the monitoring of daily responsibilities and services performed by the technical support for users:

- Solving the practical and operational problems related to information technology by providing assistance and guidance to all staff of the ministry whenever necessary.
- Creating and preparing the software and automated computers to the ministry staff.
- Updating the operating systems and software on a regular basis like Windows update, Antivirus and Office.
- Inspecting and previewing computers and their accessories and making sure of the extent of the computers' powers and making the necessary recommendations.
- Inspect and preview the new computers received from the procurement department and making sure that they meet the required specifications.
- Knowledge of the latest developments in the field of information technology in the work market relevant to the needs and requirements of the university, and providing the Procurement Department with the latest specifications of modern computers and their accessories.
- Ensuring of the property rights of applied programs in computers, as well as keeping and documenting the software licenses in a special register.
- Working on continuity in communication and coordination with the companies which provide us with external services.
- Following-up, communicating and coordinating with the Department of Procurement / maintenance department in what relating to information technology unit.
- Making at least a weekly inspection tour of the computers in the ministry to make sure of the validity and safety of the computers of any technical failure.
- Developing controls and instructions for technical support department.
- Adjusting the technical support department budget to choose the best offers available from companies taking into account the available financial possibilities to the department.

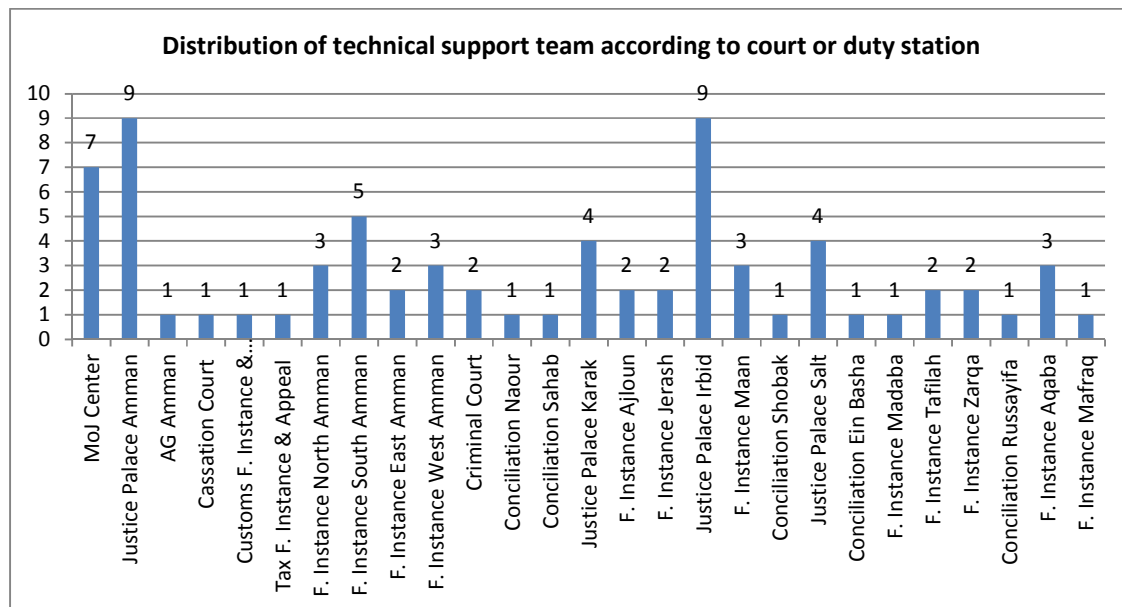
### **3. Technical capacity analysis:**

The technical support team in the headquarters of the ministry that belongs to the Information Technology Department, consisting of head and 5 employees for the technical support work for 160 computers and equipment located in the ministry. The work of the technical support team is as follows:

- Receiving calls from the courts about the malfunctions and observations on them to be followed up with the external official technical support, the company that offers technical support if necessary or with the teams in the ministry such as the infrastructure team, networks team, and Mizan team, each according to the nature and the observations of the problem (technical person for connection control).
- Following up on solving the problems of the computers, equipment and Desktop Software (relating to printing programs and other accounting and staff affairs programs) in the ministry.
- Cooperating and integrating in the work within the technical support team, the infrastructure team and network team.

It also does the work of support for solving the problems of the computers and desktop software (related to the printing programs and others) in all the courts of the Kingdom through the team in each court or in the headquarters of the ministry, and they are assisted by Masaq team in matters relating to Mizan. Moreover, they are supported by the Ministry of Justice in matters related to automation. Technical support team has 85 employees including the head, 5 staff at the ministry's headquarters and 67 technical support staff distributors in all courts of first instance and the private courts and some big Reconciliation Courts.

The technical support team in the courts of first instance makes periodic visits according to a systematic timetable whether weekly or monthly to the reconciliation courts that belong to the Court of First Instance, or emergency visits when it is necessary or needed, and write a report about the visit sent to the head of the technical support team at the ministry. The following chart shows the distribution of the number of technicians on the courts:



#### 4. Training courses:

Training courses are a feature of the modern time and an essential requirement for all institutions, since they recognize the trainings' importance and usefulness for the employees and workers in the present and future. The following are the aspects that give the trainings their importance:

- The need for employees and workers to provide the information and modern scientific developments in order to keep pace with the development and modernization.
- Developing the capacity of staff and workers and their performing skills to be reflected on their work and specialties in a positive and effective way.
- Reasons of training and the need of the institutions to develop the capacity and preparations for the employees and workers, and developing their specialized skills in the work to get to know the latest developments and find out effective ways and means to help them in their performance effectively and productively.

The training courses to develop the skills of the staff are external contracts that take place each year. They are distributed to public and specialized courses; each of them is according to its specialization, and is considered one of the costs which increase the financial burden on the Information Technology Department. The following are the main courses that were taken by the staff of the Information Technology Department, as mentioned in their records:

- Oracle Database 10g Administration
- Oracle Database 10g Monitoring and Performance Tuning
- Oracle Database 10g: Real Application Clusters
- Object Oriented Analysis and Design using the Unified Modeling Language (UML)
- Oracle data modeling and relational Database Design
- Oracle 10g Developer
- MCPD ASP .Net Web development
- MCPD : Web Developer 4
- CCNA
- Securing Networks with ASA Fundamentals for ASA 5500 series
- RH033 Red Hat Linux Essentials
- RH133 Red Hat Linux System Administrator
- Microsoft MCITP 2008
- Microsoft Exchange server administration 2010
- Microsoft ISA Configuration & administration
- Microsoft SharePoint
- Microsoft SQL Server
- ITIL Foundation
- ITIL service Management
- Project Management PMP

## **5. Financial allocations:**

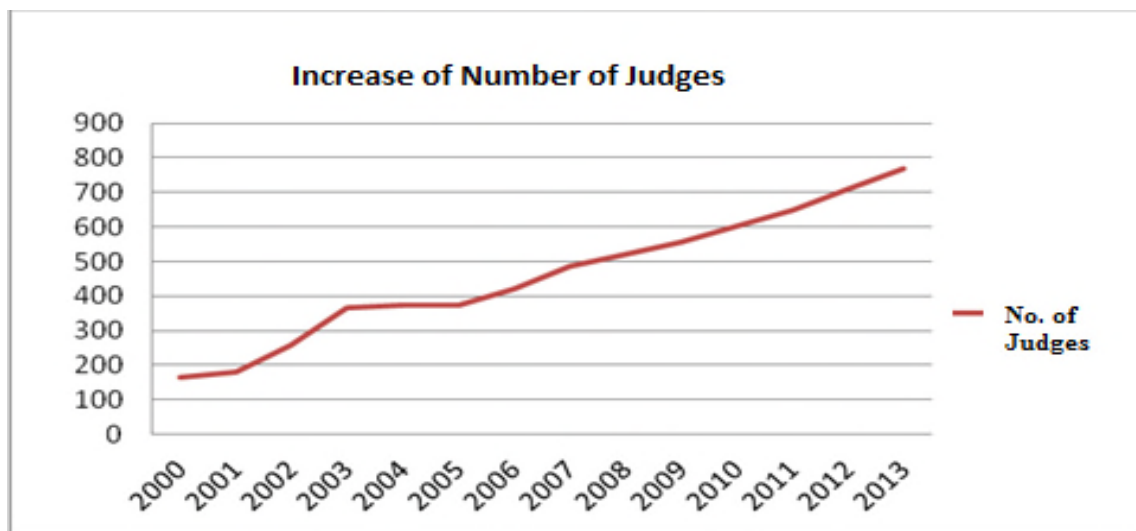
After the updating the Information Technology Department at the ministry, there is a special financial allocations for the department, which allows the expansion in the use of modern technology in the directorate, increasing the number and quantity of the devices and increasing the number of users. The financial allocations were distributed in a fair and appropriate way according to a time annual plan which shows the business and enterprise that will be followed-up by the directorate. The budget items included the following aspects:

- Annual maintenance contracts for the computers and equipment at the ministry and the courts.
- Annual contracts for maintenance and guarantee of the software and systems that are available in the ministry and the courts.
- Cost of purchasing new hardware and inks.

## **6. Expected growth and development:**

Due to the entry of modern technology to the Ministry of Justice and to all courts and the complete dependence in work, it led to a significant increase in the number of devices used in most departments. Thereby, increasing the financial burdens steadily along the increase of the constant need to increase the number of computers and other devices.

Due to the constant annual increase in the number of received cases to the courts, so it was needed to increase the number of judges and supportive staff numbers to the judges. This increase leads to an increase in the number of computers needed by the new judges and their assistants. This is one of the biggest challenges facing the ministry continuously because of increasing the financial burden for providing computers and their accessories, increasing the technical support employees and increasing the value of annual contracts for maintenance and others.



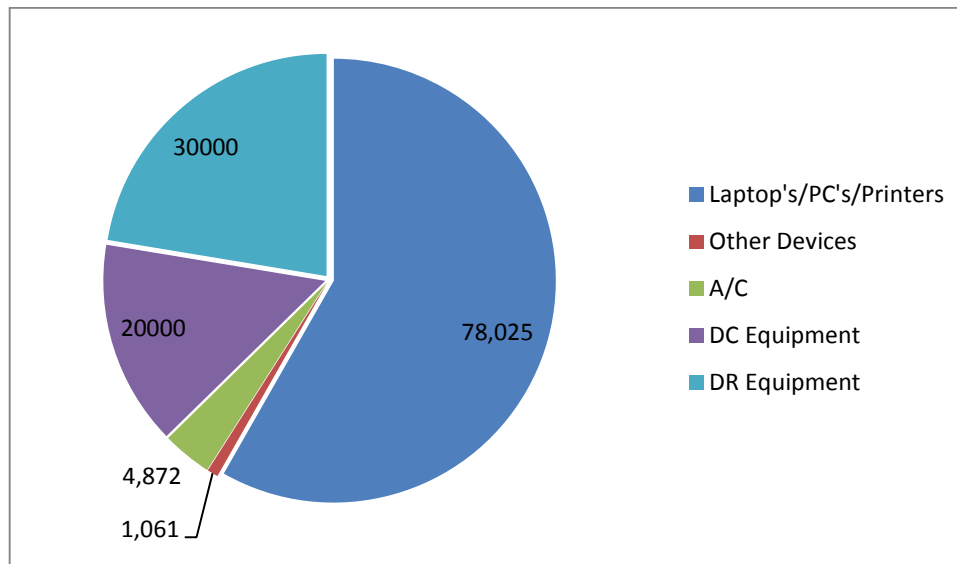
#### **7. The external contracting and maintenance:**

The external contracts that were signed with the Ministry of Justice were distributed to the companies that offer the appropriate parts for the computers and equipment used in the ministry, determined by the Technical Support Department and maintenance contracts within and outside the ministry departments (the kingdom courts). The Information Technology Department in the Ministry of Justice, external and maintenance contracts are the biggest challenges faced in terms of the consequent of the annual contracts in the department in a value of 350 thousand JDs, with more than one distributed company. So, Laptop's / PCs / Printers form a percentage of 58.4% of the value of contracts, DR Equipment a percentage of 22.4% and DC Equipment of 14.9%.

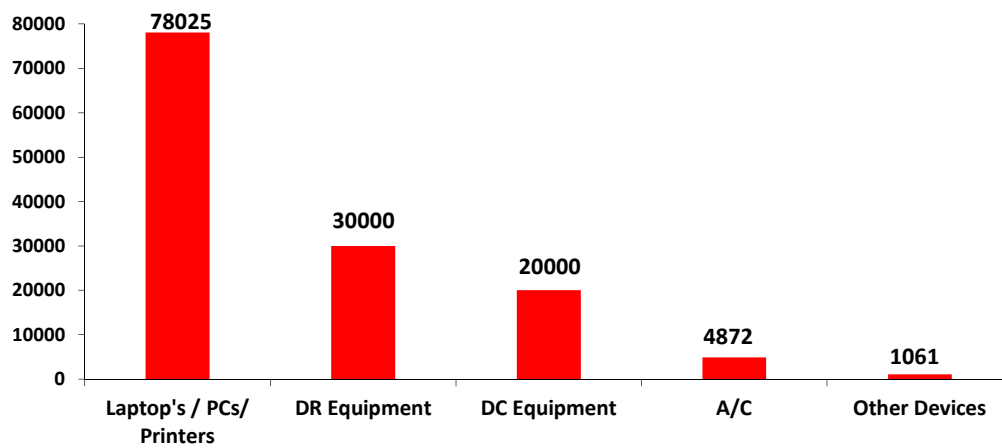
The Ministry of Justice with its staff cannot solve all the problems of the computers in maintenance, so it signed a maintenance contract with a specialist company. There are several types of maintenance contracts; contracts to repair all errors, other related to the proficient errors, and there are contracts for urgent matters and emergencies only. The following table shows that the value of maintenance contracts for computers and equipment is 106.1 thousand JDs annually, including 72.4 thousand JDs to Al-Buhaira Foundation for Computer Services and in a percentage of 68.2 % of the total value of the contracts, which handles maintenance of PCs which are 3182 computers, and maintenance of printers which are 2867

printer. External contracts and maintenance in the Information Technology Department at the Ministry of Justice are the biggest challenges faced by the department because of the annual financial consequent.

**Annual value maintenance contracts according to equipment type**



**The value of maintenance contracts for Sonia Company in JD**



**Value of the detailed external contracts according to the type of equipment and maintenance companies**

Company	Equipment included in the contract		Total number	Contract's value (JD)	Notes
Al-Buhaira Company for Computer Services	HP Compaq DX2000 with Monitor	PC	1200	72,412	The value of the contract including the public sales tax.
	Lenovo think center M55P.MT:9389-CTO with Monitor	PC	300		
	ACER 7200	PC	200		
	ACER 7500	PC	20		
	ACER 7600GT+7600G	PC	215		
	HPD330	PC	15		
	HP VECTRA 420	PC	232		
	Fujitsu Siemens pc (p3510) with LCD 17" Monitor	PC	1000		
	BROTHER HL-5250 DN LAZER	PRINTER	30		
	BROTHER HL-5240 DN LAZER	PRINTER	400		
	HP1200	PRINTER	440		
	HP1320	PRINTER	20		
	HP5100 TN	PRINTER	15		
	EPSON 6100	PRINTER	215		
	SEDCO ULTIMA 50+.35+	PRINTER	35		
	HP 2015	PRINTER	2		
	Samsung laser printer SCX4520	PRINTER	700		
	Fujitsu Siemens (V6505)	LAPTOP	300		
	Dell Inspiron 6400 notebook	LAPTOP	710		
The General Company for Computers and Electronics (GCE)	- Fujitsu Siemens TX300 - Fujitsu Siemens TX200 - Fujitsu Siemens Prime Center - IBM X3400	pc	45	5,613	
The Local Company for Computer Services (Optimiza)	oracle consulting services/ maintaining the database	Software	62	10,411	
Beita Company for Engineering and contracting	UPS	device	4	1,061	data center
Al-Namothajiah company for air	Maintenance air conditions of the type Denco	a/c	2	4,872	data center

Company	Equipment included in the contract		Total number	Contract's value (JD)	Notes
conditioning systems					
Doroob Company for information technology	Main taining programs of the type of CA	software	2	11,718	data center
	Printers' ink	INK		200,000	
				30000	DR
The total value				106,088.53	

## 8. Maintenance mechanism for computers and equipment:

The main purpose of regular maintenance is continuing of the performance and the work of the computers and their accessories without stopping or blackout to ensure the continuity of the work, so the maintenance objectives should be placed in the context of the overall objectives of the systems, and consistent with the nature of the maintenance work. These objectives are as follows:

- Increasing the time for the computers and equipment to keep working as far as it is possible.
- Keeping the value of computers and equipment by decreasing the rates of damaging and problems in operating them as a result of mistakes in operating them.
- Achieving the two above objectives with the lowest possible cost in the long term.

To achieve the objectives of maintenance, it requires improving the mechanism and procedures of maintenance work through planning and scheduling of work and strong following-up maintenance requests and implement them in the proper time to avoid delaying or neglecting them. It should be noted that the work of technical support team in the courts and the Ministry of Justice has not reached the periodic maintenance or strategic maintenance, where the maintenance work is only if it is need or the computer brakes down. The maintenance work is done through a special form, but there are no archives documenting these problems and failures, or a special archive for the visits of the maintenance company that was contracted with the ministry.

## 9. Daily consumption:

The materials consumed daily are factors of increasing the expenses of ministry and the courts, as well as maintenance work of the computers. If the consumption decreases, it would be an important factor in reducing expenses. Printers and copiers are the more parts that consume a lot. To rationalize the consumption, it requires raising the efficiency of the devices through periodic maintenance, and the printers can reduce the cost of inks and operating costs. Also, reducing the use of paper in correspondence, instead it can be achieved through using the electronic culture in communication to reduce paper use in communication.

## **10. Required Skills:**

With increasing the use of technology and increasing the number of computers with different types in the ministry and the expansion of use, the skills of the technical support staff always needed development and training in order to keep pace with modernization and updating in the used information technology and in the ministry. The required skills of the technical support staff is one of the challenges faced by the Information Technology Department.

## **11. Crisis management and problem solving:**

The problem means an emergency case stops the work, while the crisis is the final result of the accumulation of a series of cascading problems in a row that pose a threat to the workflow. With increasing numbers of computers and equipment that is depending on by the workers and employees in the ministry, the Information Technology Department put plans and procedures are followed up and depended on in case of any internal problem happens. Moreover, if it needs external support or assistant, the Justice Department signed maintenance contracts and specialist support with external companies.

## **12. Purchasing cost and life span:**

The Information Technology Department developed scientific plans each year to identify purchasing cost of the ministry commensurate with the expected development and the annual growth at all levels and aspects. Devices and equipment have a lifespan, and then they need somewhat an expensive maintenance or replacement of either for updating or for the current technical development.

Microsoft Company confirmed at the Worldwide Developer Conference that the life span of a computer is precisely 4.4 years, where this number is close to the age of five years that predicted by many computer experts. The aging that infect computers is not because of a error or mistake in them, but because they are not able to keep up with the requirements of operating systems and modern programming. So, from an economic point of view, old devices are kept and being updated each time where there are new requirements of the programs, it is not beneficial of the long term.

It is noted from the table below that most of the computers and equipment that distributed in the ministry were installed between 2008 and 2011, amounting to 4.1 million JDS, including 1.5 million JDs for personal computers, and 900 thousand JDs for Servers, the age and the validity of those devices is about to finish and the time for replacing them with modern and new computers is closed, or increasing the percentage of maintenance and development, where this is one of the challenges faced by the directorate.

**A table showing the number of computers distributed in the ministry and the courts, and the approximate cost price for the purchase of new equipment**

The device's name	Quantity	Purchasing cost	Total cost	Expected lifespan
PCs	2935	500	1,467,500	5
Printers	2770	100	277,000	4
Laptops	1010	600	606,000	10
Servers	180	5000	900,000	10



UPS	710	320	163,300	5
Core Switch	5	73000	365,000	10
Kiosk	4	40000	160,000	10
Firewall	2	15000	30,000	10
SAN Storage	5	7500	37,500	10
A/C	4	11000	44,000	5
Rack	32	2000	64,000	10
<b>The total of the contracts' value and the average of the lifespan</b>			<b>4,114,300</b>	<b>8.1</b>

Regarding the annual expected cost of purchasing for replacing the old computers that their lifespan ended, and consumed materials reached about 867.6 thousand JDs annually as shown in the table below, including 72.3% computers instead of the consumed computers whose lifespan ended, including 4.3% new computers to increase the number of judges in the courts in a percentage of 23.4% of consumed computers and printers.

#### **Expected purchasing cost for replacing old devices with new ones**

<b>Type</b>	<b>The cost</b>
New devices instead of the consumed previously used	620460
New inks for printers instead of the consumed ones	200000
New devices due to the continuous increase in the number of judges in the courts	37170
<b>Total of the expected value</b>	<b>857630</b>

There is no definitive time limit to replace the computers in the courts, because the replacement process depends on two main reasons:

First: the having problems periodically in the device, in this case some problems of the device are being fixed by a technical support employee in the court or send the device to the headquarters of the ministry or calling the specialist company in technical support and maintenance, if the technical support employee in the court couldn't fix it. In this case, main taining the device takes long periods exceeding weeks.

Second: buying modern computers and equipment more developed than the old if there is an adequate budget for the purchase. This solution is rarely applied, so it is replaced by updating the computers through updating the memory by adding a memory for the used devices.

The majority of devices and equipment in the courts had been installed, mostly between 2008 and 2011 and therefore the age and the validity of those devices have a boat to finish and lame replaced with modern and new or increasing the proportion of maintenance and development of the subject is one of the challenges faced by the Directorate. The following table shows the maintenance cost per unit per year and

in the amount of \$ 149.7 thousand dinars 5% of the total overall cost of the devices, amounting to about 3 million dinars.

The majority of devices and equipment in the courts were installed between 2008 and 2011. Therefore, the age and the validity of those devices is about to end and it is almost the time to replace them with modern and new devices, or increasing the percentage of maintenance and development, which is one of the challenges faced by the Directorate. The following table shows the maintenance the annual cost per unit and in an amount of \$ 149.7 thousand JDs in a percentage of 5% of the overall total cost of the devices, amounting to about 3 million JDs.

**Number of distributed devices in courts, and the approximate cost for purchase of new devices in JD.**

The device's name	Number	The purchase cost for each	The total cost	The maintenance cost for each	The expected cost
PC	3227	650	2097550	5%	5 years
Printers	1857	130	241210	5%	4 years
Laptops	1010	650	656500		10 years
<b>the total cost</b>			<b>2995260</b>		

### 13. Types of devices:

After the expansion of the increased use of technology and automation in the Administrative and Financial departments in the ministry, either for the personal use, or use systems based on the local network in the ministry or the use of the Internet. All of this led to increasing the used devices in the ministry, which is summed up in the following table:

The distribution of the used devices in the ministry according to their types (uncompleted table...)

The device's name	Number
PCs	234
Printers	126
Laptops	
Servers	
UPS	
Core Switch	
Switch	
Firewall	
Storage Device	
A/C	
Environment monitoring devices	
Firewall and diagnosing devices	

Rack	
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#### **14. Computer networks:**

Fiber- optic networks were installed in the ministry building to connect the computer network service and backup data center in the ministry with the main data center the in the new Palace of Justice and with the secure government network (SGN). A Local Area Network was established to connect and link all the computers in the ministry. All of the courts are connected with the main data center in the new Palace of Justice .

At the level of the courts, the network of optical fiber was extended in the Palace of Justice building to connect a computer network service in four floors including 14 Switches and 10 cabinets' networks. Local Area Network have also been established to connect and link all the computers in all the courts, all courts are connected with the main data center in the new Palace of Justice.

#### **Third: Challenges, recommendations and future needs for modernizing and developing the infrastructure for information technology.**

##### **1. Challenges and problems:**

The main challenges faced working at the level of the Ministry and the courts is how to move from using the computers to write and print the records and decisions, into a new phase depended on the use of the electronic files instead of manual. The other challenge is the allocation of financial resources or annual budgets to modernize the equipment and maintenance contracts with suppliers to ensure that the workflow. The following are the main challenges and problems:

- 1- Preparing the infrastructure in terms of providing modern equipment that case the needs of work and electrical processing , and network extension
- 2- Modifying the courts' buildings to accommodate modern technology.
- 3- Providing human resources for the automation of the courts, and providing expertise and making the necessary technical training, through a national institution for training, for example.
- 4- Developing the work of the Computer Science Department at the ministry in terms of the number and specialization to be able to provide the required services to more than 3,500 computers, and the number is increasing day after day, after completing the implementation of plans to automate the courts and Mizan Program.
- 5- Increasing the number of, where there were two servers in the Ministry of Justice for the internal use of the ministry (DEC Minicomputer, and one new server cluster). Developing and updating require more than 30 servers, where most of them are distributed in the courts in different geographical areas .
- 6- Challenges related to updating the equipment at the end of its lifespan and replace them instead of maintenance, and collect the old ones to be replaced with modern ones, instead of the costs of main taining or updating them.
- 7- Daily consumption of inks and equipment from are peRMANent challenges facing the Information Technology Department and need solutions and alternative ways to reduce and rationalize this consumption.

- 8- Challenges related to the possibility of the participation of many users in the information and data at the same time.
- 9- The possibility of modifying or transferring the information electronically to other computers.
- 10- Challenges related to keeping the information stored without losing them in case of a technical error of the devices.
- 11- There is no quick way to retrieve or search for the information of a specific case.
- 12- Lacking the possibility to search for parties of a case to or its situation or any data related to the cases.

## **2. General recommendations and future needs for the development and modernization of infrastructure :**

### **2.1.General recommendations:**

The main general recommendation is the need to develop a strategic plan to follow up the work of computers and equipment, and ensure the performance of the work correctly. And making the necessary maintenance work in a scientific manner to reduce the problems and minimize the process of buying and expansion of non-essential equipment that increase the financial burden. As well as working on the following:

- 1- The need for a legislative and technique mechanism for the adoption of the internal electronic correspondence at the level courts and the ministry. The external at the level official and non-official institutions as a fast means to exchange the official documents signed with the necessary electronic signatures in order to enhance the credibility and trust of the users in electronic correspondence, and it reduces the cost of transferring the messages and speeding up in delivery and the cost of consuming the inks for printers and increases the validity and reduce paper use.
- 2- Activating the query through the Web to decrease the visits to the query offices at the ministry and courts and reduces the pressure of the beneficiaries and the cost of printing.
- 3- Imposing simple fees on every paper or document printing process, and replacing querying and occupying the employees with finding the information for the beneficiaries with making them visit the website of the Ministry of Justice on the Internet and use the e-services of the ministry to find information without visiting the courts.
- 4- Providing infrastructure that able to accommodate the new technology, and providing professional technicians working in the courts. There is a real need for a new quality of trained and professional technicians to carry out the management and support the new servers, operating systems and used programs, and dealing with a new database program for automating the courts' program including Mizan Program and database management systems, with the developed versions of Mizan program, and with the management of wide area networks and local ones.
- 5- Training of trainers in the Directorate of Information Technology to take over training the crews of the ministry and courts in the areas of maintenance, electronic networks, programming, how to deal with errors and others. In order to reduce depending on the ministry teams or maintenance company is contracted with annually.
- 6- Conducting a study to identify the type of problems in the equipment and their reasons in order to find appropriate solutions to these problems, and avoided them in the future. And about what

helps to purchase necessary spare parts at wholesale prices and provide them in the Supplies Department in the ministry which saves the cost of buying separate units and avoid the high prices.

- 7- Sharing the IT equipment among users is one of the modern means of providing equipment, inks, maintenance and material cost through the use of more than one employee or department to share the same printer.
- 8- The need to use the special licensed programs for protection, including anti-virus programs that disables the computers, causes the data lose, slow down the speed of the network, affect the speed efficiency of the system and threaten the central device. And the need to reduce the use of external memory devices such as flash or optical disk to reduce the transmission of viruses to the computers by these means.
- 9- Reducing the powers of the Internet in the ministry and in the courts while maintaining the workflow and the confidentiality of the information and data, and ensuring the correspondence and preventing the abusers to access to such information and data. The more the computers and the central devices are separated from the external means, the more such the data and information are confidential and viruses are not transferred to these computers.
- 10- Providing a specialized center to solve problems that appear in the courts through the use of modern technology, helps to solve some problems remotely without visiting the courts and increasing expenses and costs resulting from those visits.

## **2.2.Future needs:**

The most important future needs to develop and update the infrastructure of the Information Technology Department as mentioned by specialists in the department, is concentrated in the main computer center to renew the maintenance contracts of servers that not guaranteed, and maintenance contracts for network devices (Switches, routers and firewalls) and data storage devices, and the renewal of maintenance contracts for the operating systems, databases and backup programs. Moreover, renewing the maintenance contracts for surveillance and alarm systems, firewalls, energy-saving, air conditioning and securing some of the key programs and renewing some of the current computers licenses and existing applications.

Regarding the annual needs of the Information Technology Department, there were divided into two parts, where the first one is related to the need for devices and equipment as follows:

1. The need for about 200 computers in order to cover the renewable needs of the courts and to update current operating computers, because have been used for a long time and need constant maintenance.
2. The need of about 150 laser printer annually to cover the renewable needs of the courts and to update the current operating laser printer, because they have been used for a long time and need constant maintenance.
3. The need of the ministry for about 600 scanners for archiving the lawsuits files in all courts.

The second part of the annual needs is related to human resources for Information Technology Department. Where the current staff number in the department is about 100 qualified employees in the areas of programming and technical support for networks, computers and their accessories. To decrease

the burden on staff in the computer departments in the governorates, who do periodic technical support for the reconciliation courts, the Directorate needs to hire more employees to provide technical support in the individual reconciliation courts. It also requires providing of training courses for new and old employees and giving them the skills to keep pace with the rapid technological developments in the field of information systems. The following training courses are proposed for the coming year:

1. Oracle Database 10g Administration
2. Oracle Database 10g Monitoring and Performance Tuning
3. Oracle Database 10g: Real Application Clusters
4. MCPD ASP .Net Web development
5. MCPD : Web Developer 4
6. CCNA
7. Securing Networks with ASA Fundamentals for ASA 5500 series
8. RH033 Red Hat Linux Essentials
9. RH133 Red Hat Linux System Administrator
10. Microsoft MCITP 2008
11. Microsoft Exchange server administration 2010
12. Microsoft SharePoint
13. ITIL Foundation
14. ITIL service Management
15. Computer Maintenance A+

## CHAPTER THREE

### Diagnosis of the reality of Operating Systems, Databases and Software programming language before and after automation

#### First: operating systems before and after Automation Project:

The operating system (OS) operating system is a set of software responsible for the hardware, software resources and computer software. It represents a mediator between the user and computer; we can say that it is an umbrella for end user software. The operating system has essential tasks such as the management and allocation of sources (computer memory, hard drive, access attached peripheral devices ... etc) and ordering dealing with orders, control the input and output devices, facilitating networking, file management.

#### 1. Operating systems before starting Automation project (before 2004):

Before the commencement of the automation, the Ministry of Justice had started work to automate some office work in the ministry, by providing some of the staff in the courts with computers and printers to print judicial decisions and judgments (records, the management of the case, rents, implementation) Using Microsoft Word. The following diagnosis of the operating systems has the following aspects:

##### 1.1. Available operating systems:

There was no unified system in the center of the ministry, but several separate and simple systems. The work, for example, in the system (Fox Pro), administrative and financial regulations in Cobol language that uses non-relational database, a (Micro VAXII) server using an operating system (VMS) and programming language (dibol)/ reports (cobol), the work was performed and connected through screens (dummy Terminal).

#### Number of PCs and servers in the Ministry of Justice and the courts before 2004

Type of machine	No of machines	OS	No. of virtual machines	OS
<b>Before 2002</b>				
Server	1	VMs	-	-
client PC	200	Windows 98	-	-
<b>Before 2004 and after 2002</b>				
Server	1	Windows 2000 server	-	-
PC	800	Windows 2000	-	-

##### 1.2. Security from the perspective of operating system:

Which means the verification of users before allowing them to access the data, however, the need to check the user was through the user name and password on each device in the center, there was no central users directory (Active Directory), security system (ISA) or a (firewall); because there was no networks, centralized systems and joint statements.

##### 1.3. Application interface:

Provide this interface with software developers and applications with a group of basic functions which frequently used such as algorithmic functions, Memory Management, dual for graphic files, graphical management functions, management functions and other as well as facilitating the work of the program as it provides to these tasks in programs that writes. The Windows 98 is one of the operating systems of graphical systems that are easy to deal with, with a few individual skills that do not require further study or knowledge.

#### **1.4. Basic functions of operating system:**

The essential functions in the work of the computer, the most important of these posts in that period (before 2004) are: organization of user files on many of the storage media (storage media) such as disc steel and CD (CDROM). Every operating system depends on file system.

#### **1.5. Analysis of the capacity:**

The ministry's capabilities were suitable with the demand and need of operating systems, most needs were mainly on download of the operating system, format disks, and the use of operating systems. These are simple capabilities required to the few ministry staff at that time.

#### **1.6. The infrastructure of operating systems:**

There is no clear plan to organize the distribution of available devices and micro-enterprises, and there were no specific tasks for users of hardware devices, they were distributed to the judges, as available.

#### **1.7. Cost benefit analysis:**

Before 2000, the goal of using technology is limited and there was no clear vision for the Ministry of Justice in how to use technology in conducting and facilitating day-to-day business of the ministry staff. Moreover, there was no real budget for this sector in the absence of any applications on computer that serve the Ministry of Justice.

#### **1.8. Expected Growth:**

Between the years (2000 - 2004) started the idea of automation of the work of the Ministry. It has been assigned to the Royal Scientific Society to conduct the Technical and economic feasibility study to study the needs of the project. The first actual work for the network of center in the ministry started, which led to the adoption of Windows Server 2000. While the users devices use Windows 2000. On the basis of that work, it has been started on the adoption of the security system in the ministry which adopts new technology at the time (such as Active Directory, ISA) but that has emerged to reality after 2004.

#### **1.9. Licenses:**

The licenses used to be bought with each new device, and the cost of devices covered by permits of operating systems.

#### **1.10. Maintenance on the devices:**

Maintenance is performed only when reporting on contracts for error. There is no periodic maintenance or a mechanism for reporting on the error, predominantly was through telephone contact. Maintenance was carried out in a non-scientific and non-institutional, while there is the possibility of loss of existing documents in the devices.



The operating systems of the software it has developed rapidly in the contemporary world . The action of improvements systems operating systems or establishment of higher level, according to the development of devices and their capabilities, and on this basis, it must be in the development of operating systems and devices, commensurate with the requirements of the ministry. Therefore, it is noted that there is a rapid shift in operating systems of VMS to Windows 2000 and windows 2003 servers. The devices to user's screens terminal Screen then became PCs with Windows 98 , and Windows 2000.

## **2. Operating systems after starting automation project (after 2004):**

The main professional services provided by the operating system to facilitate communications between the Ministry of Justice and the judiciary, where the majority of the circulars and correspondence, internal and external, through electronic mail, has been limited by the mechanism of correspondence paper significantly, in spite of this, some staff (administrators and judges) needs training to deal with the computer. It is a lot of time and effort in the process because of the adoption of e-mail messaging and because of the availability of existing systems, and the process takes 10% of the time that the duration of the process of correspondence. The following are the main technical features and services provided by the operating system:

### **2.1. Providing security and protection :**

This means the verification of users before allowing them to access the information, classification of levels of authorization per user, and limiting the level of access according to the policy defined by the system administrator. The protection systems existing in the Ministry were many and complex and difficult to penetrate by infiltrators from outside or from within the Ministry, they depend on the existence of a Firewall between each device and also use the Users Management available in modern operating systems so as to give each user desired authorizations, starting with the application of all national policies for the security and protection of information, as well as the establishment of a Special Policy Directorate and their application to the users and personal devices, servers and network key interior ministry, and the user accounts , email , in addition to protection of data backup ..... etc. ), and on the World Wide Web. In addition, there is the operating system currently in place following characteristics:

- To give IPS in variable (Dynamic) form upon activation of DHCP part.
- Establish Central network users and groups and giving authorization, using Active Directory
- Definition of local networks (domain s).

### **2.2. Application interface:**

Currently in the Ministry there is more than one operating system according to the application. Where between each period of time latest operating systems available in the markets are used, and they are as follows:

- Operating System 4.5 (server).

- Windows Server 2003 (server).
- Windows Server 2008 R2 (server).
- Windows Server 2012 (server).
- Windows XP Operating System (Desktop).
- Windows 7 (Desktop).
- Windows 8 (Desktop).

**The period of time for the Operating Systems in the Ministry center and the courts after 2004**

<i>Type of machine</i>	<b>No of machines</b>	<b>OS</b>	<b>No. of virtual machines</b>	<b>OS</b>
<b>After 2004</b>				
<b><u>In DC and Dr</u></b>				
Server	60	Windows Server 2008 R2	16	Red Hat Linux 5.5
			13	Windows Server 2003
			83	Windows Server 2008 R2
			3	Windows Server 2012
<b><u>In courts</u></b>				
Server	80	Windows Server 2003	-	-
Server	30	Windows Server 2008 R2	-	-
client PC	2750	Windows XP	-	-
client PC	200	Windows 7	-	-
client PC	2	Windows 8	-	-

**2.3. Basic functions:**

Basic Operating system functions in the work of the computer, the most important of which are: the organization of user files on many of the storage media (storage media) such as disc steel and CD (CDROM). It also depends on the operating system and file system (File System) of its own. For example, it depends on most of new Microsoft operating systems from windows to NTFS. In addition, there are other functions as follows:

- The organization of software loaded on the computer and devices hardware) related to it, bundles of keys, panel and printer, etc).
- Error Handling parts of hardware and software to avoid loss of information.
- Main tain the confidentiality of the system in order to ensure that no unauthorized access to data and software.

- Management of Main memory units, and management I/O processing unit and secondary storage units.

#### **2.4. Analysis of capacity:**

After the use of advanced operating systems, there is Staff Development Section in the computer section to keep up with the development of operating systems and management complications in these systems, exploitation of their certificates and energies and what was possible to keep pace with this development. However, it was not necessary to resort to the staff of foreign affairs because the possibilities of staff were limited in this area, rapidly advanced training courses had been secured for a number of them so that they are now doing the necessary maintenance for devices and systems and to provide substantive and technical support to the maintenance of foreign companies contracting with them, and not to deny here that salaries were not commensurate with the volume of the work assigned to them.

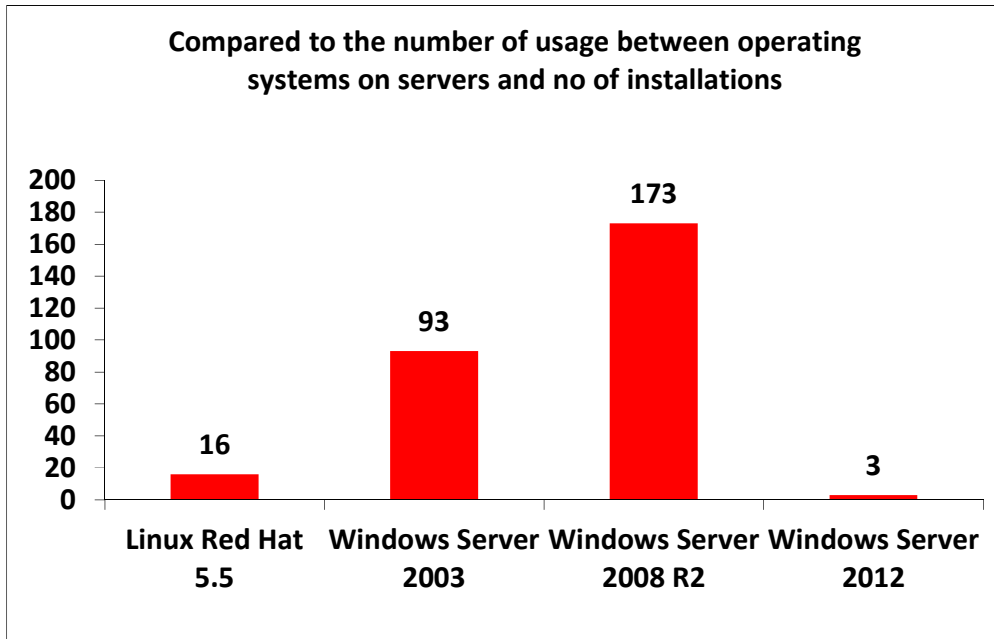
#### **2.5. Cost benefit analysis:**

Benefits of automated information systems in governmental institutions belonging to two elements: the achievement of the objectives of the Organization in improving the quality of services and staff auditors in all forms, and the use of automated information systems as a means to save the cost of the operation. (Countries shows a comparison between operating systems of protection and easy and cost).

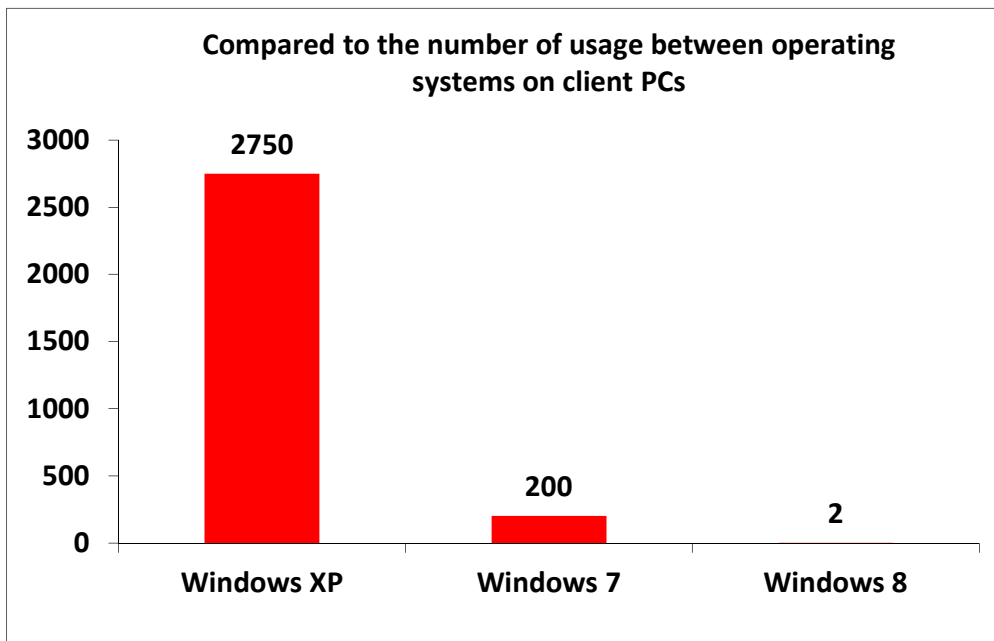
#### **2.6. Expected Growth:**

The operating systems of the software, developing rapidly in our world is the work of improvements or establishment of systems operating systems at higher level, according to the development of devices and their capabilities, and on this basis must be the development of operating systems, commensurate with the devices, Ministry work and phase requirements:

- **Servers:** it is noted the increasing number of use of Windows Server 2008 in spite of the Windows 2003 preceded and was unique in its time. However, the need to update and enthusiasm of ministry staff led to transform many of those servers. Upon reviewing the table above, we find that the servers in the main computer center, most of which have been converted to Windows Server 2008 R2, only some of these servers have not been converted to a few systems due to few requirements of Windows Server 2003. These systems need modernization to be able to update operating systems. The operating system had not been used in windows of the features in the application interface (GUI) but features in safety rules imposed itself on the server's data to ensure their safety and protection.



- **The Desktop:** Despite the enthusiasm of the court staff to update. However, still most of these devices operate on the Windows XP operating system and the reason for this is that the available desktop hardware specifications are old need to work Update Hardware before Updating the operating systems.



## 2.7. External contracting/procedure:

There were no external contracts for the operating systems because there is no need for that, all contracting is internal and done by the Ministry staff on regular basis to solve problems or install operating systems and other.

#### **2.8. Licenses:**

There were no costs for licenses of Ministry of Justice, as the licenses had been at the expense of the agreement between the government and Microsoft, there was no cost except for the Linux operating systems, 16 were purchased once and there was no renewal of contracts for maintenance beyond that need.

#### **2.9. Crisis management:**

The reporting of failures in the system is done regularly in a systemic way through the coordination and support with the staff of the Directorate in the ministry after receiving the report from the courts electronically, failures and issues are checked by the competent companies if the failure is out of the scope and expertise of Directorate staff, a technical report is filed, and then are repaired according to official channels.

#### **2.10. Notification:**

Before the process of repairing, or maintenance, it is the duty of the employee to back up copies for device data to be repaired.

#### **2.11. Virtual Age of operating systems:**

The virtual age of users of operating systems is about four years, but it can be exceeded.

#### **2.12. Update and development of operating systems:**

The staff of the ministry continuous desire to follow-up the latest updates on operating systems. Therefore, whenever an update of the operating systems is out plans for modernization are applied either on the level of upgrade, on each operating system level. We find that updates are directly processed through the central servers connected to the Internet, including the updates of PC whenever Microsoft issues update for these devices.

#### **2.13. Cost of operating:**

The operating systems did not have any cost on them for the following reasons:

- Good experiences in Ministry of Justice on operating systems, therefore there was no need for contracts, the Ministry staff handled this task so that they prepare alone virtual machines required and clustering or load balancing.
- Giving good care to the ministry staff so that they have these experiences through specialized courses.
- Cooperation between the Ministry staff and Masaq gave distinct experiences and capacities which enables them to manage the situation.
- The use of specialists at the Ministry of Communications, or through the government agreement with Microsoft.

#### **2.14.Observation:**

The computer center staff in the Palace of Justice follow the operating systems on a daily basis, and sometimes more than once a day.

### **3. The challenges and problems in the field of operating systems:**

Despite the fact that Jordan has become a pioneer in the field of the use of technology at the level of the Middle East, but the information technology in the judicial sector faces a number of challenges, the most important of which are the following:

- Main challenge is the Ministry's capacity to attract scientific qualifications and experience the process to work in this sector.
- A limited number of staff in this area.
- The Ministry's capacity to keep pace with developments and updates in the field of information technology through the training and rehabilitation of the staff in the framework of the training program for staff new and old.
- The Ministry's capacity to maintain its staff in the field of information technology by improving their competitive position material in the labor market with the private sector.

#### **Second: The database before and after the automation project:**

The database is a set of elements data associated with logical relationship with each other in sport. It consists of one or more, the table consists of a record or more than a record in the field (FIELD) or more. For example, the special register of a certain officer consists of several fields such as number of employee - the name of the staff member - the grade of staff - the date of the recruitment - salary - the section he belongs to, and that the employee data. They are stored in computer in an orderly manner ) so-called (Database Engine) to facilitate dealing and search within this data, and enable the user in addition and amendment.

The system of database is the program that is being used to retrieve data, or addendum or amendment, or delete, as the program links between the user and the database engine, to perform that task.

#### **1. Databases before automation project any before 2004:**

Before the start of the work with MASAQ, the Ministry of Justice had bought administrative systems in both working languages COBOL (dibol) in 1987 and the data stored on the flat files. There was no relational databases to the ministry till software programmers started to develop their programs on FoxPro , access has been to FoxPro is the lucky owner but those systems were limited to a few and small sites.

It started after 2002 through a qualitative leap in the ministry, where was the adoption of ORACLE data base to be the administrative systems in the ministry, after contracting with Royal Scientific Society but

remained limited to use in the ministry without the courts, which remained without regulations and a database for storage. In spite of the fact that the sessions of competent staff, but the practice was because of the lack of a few staff working in this area, as well as the low level of training programs for staff. The following are the main characteristics of technical data before 2004:

#### **1.1. Programming and software:**

The programmers must rely on the application interface Oracle (SQL plus) and depends on the ability of the programmers in writing SQL until the TOAD program when the programmers began to use, which facilitated and increased the delivery and control over the database.

#### **1.2. Infrastructure:**

There was only one server dedicated to the database that is backed up on a daily basis using Export a weekly backup using RMAN and copied to the flash drive.

#### **1.3. Licenses:**

Licensing was not mandatory; therefore, no licenses were obtained, as the need was very limited because of having a single database on one server that has relatively modest specifications. Therefore there was no real interest in licensed databases not before 2004, but after that, license was mandatory.

#### **1.4. Expected Growth:**

The expected growth in this period was slow and not worrying because it only contained the data of management systems in the center of the Ministry of Justice systems such as payroll, personnel and expenditures and all saved in backup of easy retrieval.

#### **1.5. External contracting/procedure:**

There was no contract with specific external database companies, but there was a contract on the administrative systems by the Royal Scientific Society dedicated automatically to the maintenance of the database, and there are no reliable and lasting maintenance on scientific basis. The mission of the Ministry staff to follow-up programs is small in size.

#### **1.6. Analysis of interest:**

Before Automation of the work of the courts before 2000, courts have not started to use the computers, where the records of the meetings were in handwriting, and in some cases be printed using Microsoft Word, the mechanism for reporting manually. Before automated system of the interest and services provided by the system are a few and modest accompanied by many problems and challenges in the work of the judges and the brackets, especially with regard to the registration issues. The following are the main problems:

- The lack of a unified and integrated registration numbers in proceedings and addresses of the parties and their attorneys, which led to a repetition of the figure, therefore, difficult to retrieve the file and the difficulty of finding the parties to the proceedings and their lawyers.

- The failure to provide new files annexes proceedings which displays documents lost.
- Reviews of notification were handwritten, and carbon sheets were used to get more than a copy, which consumes time and effort, especially in the preparation of the notifications is large. Usually, the record name, address, is not clear, which lead to the failure of notification because of these errors.
- Often the agenda of Judge disturbed because of the difficulty to know the meetings to be held by a judge in a certain period for adoption of the agenda hand grenades.
- Reviews of record of meetings manually by clerks takes time and effort and minimize the number of meetings that can be terminated in one day, also lead to the difficulty of amending the record if discovered in which any mistake. Providing a copy of the record paperwork delays chapter in the issues in the case of loss of the record.
- The lack of accuracy of data on the pending and new cases during the month because of the existence of more than a record of more than one type of cases because of the presence of files contained outside cabinet in other places. The pending cases at courts are counted for manually or previous figures are adopted.
- The lack of accuracy of data on the disposed issues within a specified period of time due to manual count of issues, which are disposed by the judge, the judge is chapter large numbers of cases in the last day of the month following the month in case an amendment to anything inside the file it is difficult to know the person who made the amendment which lead to easy tampering issues. Also allows any member of the staff of the Court to any file in the Court, therefore, loss of confidential information and privacy of litigants.
- Interaction between the Ministry and the judiciary and the exchange of correspondence, documents and between them was carried out manually, and it should have the recruitment of a staff to write the texts as well as sent to the person concerned. Where the process of correspondence and the exchange of documents, take the time between writing the answer and send it ranging between 3-10 days.
- In the absence of any actual applications on the computer, there is no need to contract with an outside any other company to carry out any functions of the definition of operating systems somewhat rudimentary and needs to a few of the experience, it was the Ministry staff are able to undertake this task.
- Communications and exchange of information between the Ministry of Justice and other governmental paper be, this was the procedure requires time and effort to accomplish, thus delaying official transactions and impedes completed.

## **2. Databases after automation project after 2004:**



With the start of the automation the courts have been able to adopt of a database particularly Oracle Database used for computer center has been designed for this purpose which has a sophisticated modern technology, Masag did these efforts and secured necessary funds for specialized database servers that grant easy retrieval, storage of data so that we can get the highest efficiency Oracle can provided. 6 servers have therefore been secured and every two servers serve one database using technology to distribute the loads which is provided by Oracle Rack thus became available three databases with high efficiency, As for the storage has been the use of high technology for data loss and SAN storage. The following are the most important characteristics of this stage:

### **2.1. Application interface:**

The program of the toad key program assistant to work with Oracle application interface has been allowed to move a latest copy whenever the need arises.

### **2.2. The development of databases:**

It is the subject of the development of the database of the topics which were of concern to the ministry, which prompted it to start training staff, and helped in the development of the adoption of the type of one of the databases to give considerable emphasis from 2002 until today, but it was not the development of the required level, there is still a problem in the global standards in programming the reason for this is that adopted the staff to itself and there is no guidance of analysts developers are able to transfer them to the mechanism of work there is sound problems in the development and analysis of random non-organized. In addition to the lack of motivation of staff, and the lack of appropriate environment for development.

### **2.3. The management of the database:**

To main tain the database in the case of ongoing work, and in normal speed without slow. The adoption of the local companies in support of the database management responsibility contracts made outside the scope of the responsibility of the ministry. Therefore, this gives an opportunity to staff of the Ministry in the process of development and modernization, as well as, therefore, there is no desire among the staff of the responsibility for its seriousness and the lack of incentive to do this task, and that in the event that a staff member to learn this task will be looking for jobs abroad because of the return on large physical work in the private sector. As for routine tasks such as backup or download data base, this capacity is available well in the ministry, and the necessary software they have available.

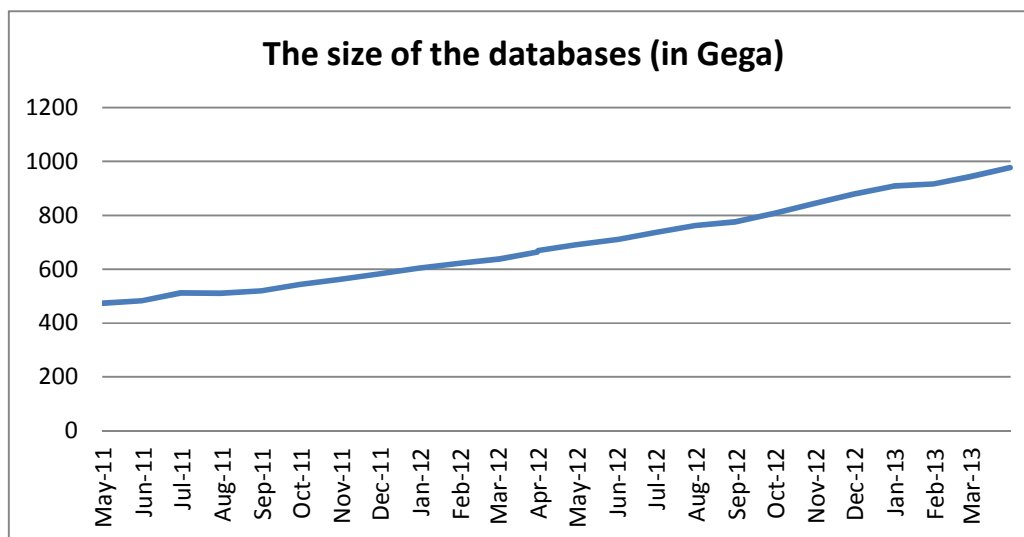
### **2.4. The infrastructure of databases:**

Special center has been set up in the ministry to be main center for Servers databases in addition to the adoption of the Linux operating system for these servers, as has been the establishment of a computer center in alternative will have been disrupted main center, have been given broad features of these servers provide advanced storage media storage (SAN) was to provide a mechanism to back up daily, as

well as mechanisms to distribute the load on these servers to ensure efficiency and speed in the query, and input.

## 2.5. Expected Growth:

With the increase in the number of software, volume and type of data required in the expected growth of the database required to re-engineering and restructuring, indexing data base commensurate with new size. The problem of storing records and notifications ( a full documents are stored in the database) within a database of the Mizan of the larger problem, making the database more than the original size 85% if these documents had been made within the system of competent archive from the outset which increased the size of the problem as well as some function in the program was able to Mizan the book of justice and implementation of archiving in Mizan-of-if work continued on this pattern, it is expected at the completion of the archiving requirements as baggage scanners and ID that increase the database annually at a rate of not less than one terabyte , but now there are switches to kick the storage of such documents to the database into the archive system, but the process convergence of great difficulty, especially after that we became huge size of these documents within it. The rapid increase in the database would lead to greater need for more time in storage in backup's work, which negatively affect the speed and efficiency of the database

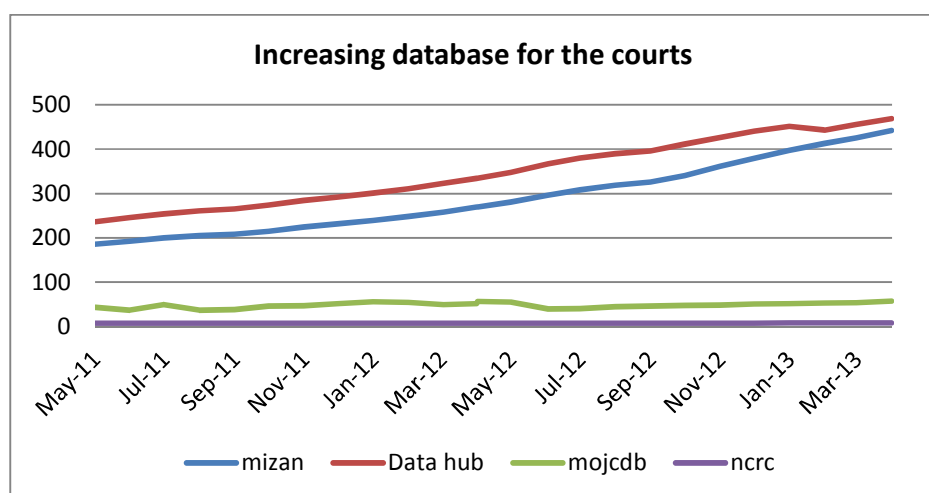


## 2.6. The number and quality of data bases:

The database of the Ministry of Justice is composed of six databases, including five in the main computer and one in the ministry, and are set out in the following table:

**The number and type of data bases used by origin and the location and purpose of**

Figure	The name of the database	The site	Purpose	Origin
1	Mizan v2	Main Computer Center	The system of courts main Mizan 2	Local companies
2	Data hub	Main Computer Center	For purposes linked with foreign institutions to store notifications used in Mizan 2.	Local companies
3	MOJ CDB	Main Computer Center	It is a Data Replication schedules mizanv2 to be used in the program bportal, Bi system reports the ministry on the Mizan of	MASAQ project
4	NCRC	Main Computer Center	The system are accommodated	Local companies
5	Accounting	Main Computer Center	accounting systems, and the Office of the courts and the Register Judicial Demarcation	The ministry staff
6	MOJ	The Ministry Center	Administrative regulations in the Ministry	The ministry staff



## 2.7. External contracting and the Ministry:

Local company are contracted with a contract that is renewed every six months with a value of five thousand and two hundred dinars, no internal contracting to follow-up the database, but the ministry staff is developing several programs on the Oracle database.

## 2.8. Licenses:

After licensing became mandatory in Jordan. The costs of the databases in terms of licenses were very high, but for one-time including an upgrade to newer version. But annual maintenance contracts remained of the constant cost because there must be DBA specialists, which obliged the ministry to have annual contracts with local companies for technical support. As for the cost of purchasing licenses for once it has

gone through two stages: the first annual maintenance contract of ten thousand dinars annually. The second at the time of the establishment of the Center for the computer and then when creating the alternative computer center. The Oracle license their products according to the number of databases that are used and the type of processor server (CPU) and the processors, in addition for example the use of the special system of distributing the loads (Oracle Rack) has a separate cost.

#### **Annual maintenance contracts by type of data bases**

	<b>Details</b>
<b>The database</b>	Oracle 10G
<b>Quantity</b>	13 DB 12 rack (13 server ..12 of them has 2 candidates is dual core CPU)
<b>available licenses</b>	15 DB & 15 rack
<b>necessary licenses</b>	25 Oracle DB 24 Oracle rack
<b>Licenses for the remain ing</b>	10 DB & 9 racks
<b>Backup</b>	RMAN .. daily for courts Export daily .. RMAN weekly for MOJ
<b>Restore</b>	We did not make any restore ..we did not requirement
<b>external contracting</b>	A contract is renewed every 6 months.
<b>The cost of available licenses</b>	Around one million JOD
<b>Cost of licenses remain ing</b>	600,000.00 JOD

#### **2.9. Backup:**

A backup is made daily data from the courts on the tapes using RMAN restore not only the work of the Ministry to be tested now. The ministry has sufficient ability to use RMAN to backup. The Ministry data are the work of the export on RMAN weekly. Take the work of backup using RMAN three hours currently data base and ideals of the Mizan of the database data hub because of its size and large technical export because it can be used for a long time in the process of copying and fail to complete the process.

#### **2.10. General Maintenance:**

The Ministry of Justice held an annual maintenance of servers six main computer center, which is a contract with a Local value of 10411 JD , while there is no maintenance contract Computer Center alternative because it is still under construction, which will continue to ensure that another two years if the warranty is expected to increase annual cost to become weakness any 20822 JD at least.

#### **2.11. Crisis management:**

In case of any problems that must be traced, the problem scientifically starts reading error log files to determine where the problem. but usually the task is the employee with the Maintenance Contract for the

database. As a staff the ministry has no experience in this area, as well as to that he is not ready to assume such responsibility.

#### **2.12. Risks:**

There is no real risks/danger in case of losing all data they could be retrieved from the backup. But the real problem is the courts stop as they are waiting to solve the problem. If the problem is large, it would take days, the major risk lies in the failure of the judiciary in the past and even today.

#### **2.13. Update and development of databases:**

Update and develop the database involves many risks, as the stored data programmed within sub-programs may not be compatible with new version, which could lead to problems that may last for a long resolved, in spite of the great desire for modernization in the Ministry of Justice to take advantage of the features of new version of Oracle, which may give additional capabilities we need such as data guard New affect the ministry to keep the security side, which threatens the courts to stop for a long time, this with the update license version of 11G will not cost anything because it is included on licenses that were purchased.

### **3. Challenges and recommendations in the area of developing and updating of databases:**

#### **3.1. The main challenges and problems:**

The main challenges lie in the field of the development of databases on how to keep pace with new developments in technology in the field of databases of the age, and improving the delivery of services and the development of new services and programs, regulations provided for all categories of dealers. In addition, there are other challenges the most important of which are the following:

1. Challenges related to how to deal with the consequences heavy financial rules for maintenance and updating the data.
2. Challenges related to how to deal with the data so as to main tain the privacy of data users and beneficiaries at the same time main tain the issues relating to information security.
3. Challenges related to how to main tain the qualified staff in their jobs and improve their competitive position with staff in the private sector.
4. The challenges related to the possibility of recruiting scientific qualifications are capable of bearing the burden this TLS System may employ technical relatively high salaries.

#### **3.2. Main recommendations:**

1. Support institutional capacity of the Ministry of Justice and the courts through training of

personnel and upgrading systems of work in the courts, fully update the electronic case management systems and training of staff in the use of procedures with the re-engineering of the issue documentary session with a view to streamlining and accelerating the process of cases.

2. The need for the Ministry of Justice on the rehabilitation of its staff to familiarize them with all what is new in the science of technology through giving them training courses between each period and the period, in particular with regard to the management of the databases.
3. Increased financial allocations for those who carried out these acts.

### **Thirdly: Programming Language Before and After the Automation project:**

Known as programming languages as languages for the process of writing orders and instructions for your computer or any other device, for example, DVDs or audio receivers image in modern communications systems guide this device and informing how to deal with data or how to implement a series of actions required called algorithms.

Follow the programming special rules of the program in the language in which he chooses the programmer. And all languages have characteristics that distinguish them from the other and make it appropriate to varying degrees for each type of programs the task of this program. The programmed languages also have common characteristics common borders by virtue of the fact that all these languages are designed to deal with computer. And evolve programmed languages (software) development of computer software (hardware).

Programming defines as the process of writing, testing, correcting errors and develop one crypto-source computer program by human programming, aimed at the establishment of programs of the application and implementation of algorithms of certain behavior in the sense that a specific function in advance, predictable results. This operation is carried out using one programmed language. The goal of programming is the establishment of the program as implemented specific operations or the behavior required. The process of programming requires knowledge in various areas, including knowledge moths, logic and algorithms.

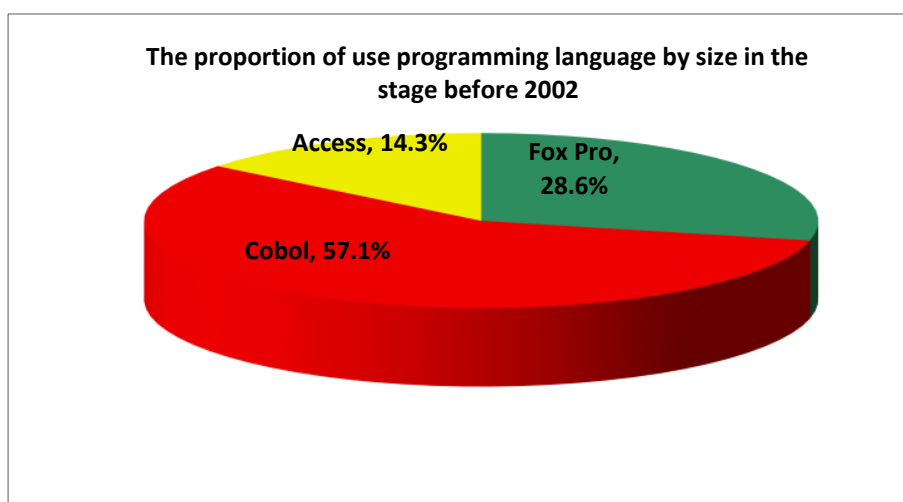
Therefore, it must be programmed to be familiar with some programming languages and to know what is the appropriate language for the implementation of this program. The only programming language understood by computer software that can deal with is the -machine language-. It had evolved rapidly programming languages such as C# language ,BASIC and other language.

### **1. Automation project programming language before 2002:**

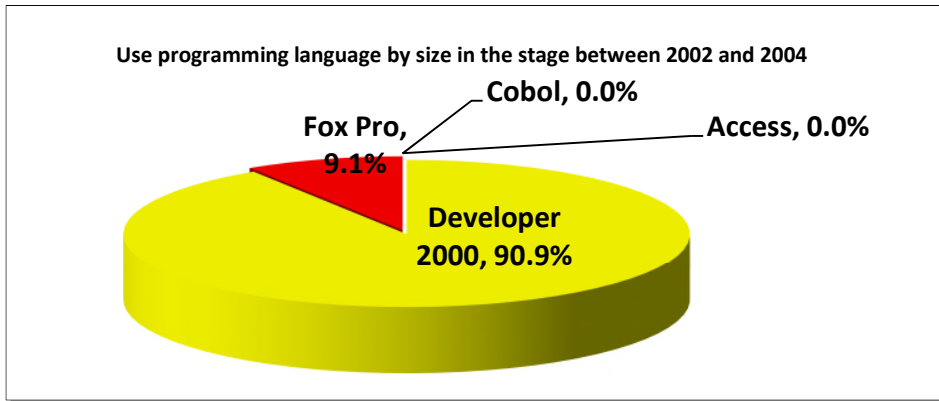
Started to deal with programming language at the level of the Ministry of Justice in the late 1990s, with the emergence of computer skills among the staff of the little number. The initiatives have been

enthusiastic about the work of a number of systems using programming languages, despite its oldness, but it was notorious in that time, and most important of those languages FoxPro, cobol, dibol, access. The Cobol of lucky, where the administrative programs, which had been purchased in 1987 was designed by. However, he did not overlook the staff of the Ministry that the courts have developed systems using FoxPro and then became the first and main in use.

It is clear from the chart below the rate of use of the language of cobol in programming amounted to 57.1% of the total volume, followed by the languages used in terms of the size of the language use Fox Pro and 28.6% and finally the language access and 14.3 %.



In the post before 2004 and after 2002 were dispensed with all the administrative systems that are used in a language COBOL timbers and used once and for all, after the adoption of the system of programmed assembly of property management systems in the ministry, which has been programmed to the developer 2000 which works on Oracle Database. The ministry staff using developer 2000 to develop software to include most other departments of the ministry, while the courts without automation development remained the administrative software, however, Royal Scientific Assembly did not move to the staff of the ministry since 2007.



Cobol language developed in programming and Ms FoxPro set up basis to enter and the success of the language of Oracle in programming, which replaced previous programming languages. It considered the application interface in that time it was the most flexible between programming languages used in the ministry, as well as because it works on strong data base. The following are the characteristics of the programming language before automation system in accordance with the following:

#### 1.1. Basic functions:

The main task of the Ministry of Justice in this stage save the data, and easy and quick access without attention to gender programming language, which is selected, and there is no central focus on data security, and the information is accurate.

#### 1.2. An analysis of the capacity:

The capacity of the Ministry in programming by compliant applications, and there was no sufficient information on the capacities of other languages and there was no push toward training of staff in these languages remain ed limited capacity. As to the language used was not easy to provide the necessary security using these languages, it does not provide the central in the application, although they provide the central database. In addition to the need to download the software Director definition when used in contrast to modern languages to enable us to develop web programs. In addition to the problem of the Software Update Required update of all users.

#### 1.3. Cost benefit analysis:

The Ministry of Justice did not have any real budget to develop the capacity of the staff of the Directorate and lack of incentives for staff led to low motivation of staff to develop themselves and other modern programming languages, and restricted their ambition to knowledge and knowledge in a language developer 2000.

#### 1.4. Expected Growth:

If the austerity policy in the government with attempts to reduce expenditures, there will be no future development because programmed resources is one of the ministry, which must be to invest in, and develop its capabilities in addition to triggered physically.



### **1.5. External contracting:**

External contracting is for the software and not on the programming languages, but there is a contract between the government and some international companies to provide licensed programming languages, including most of Microsoft languages, as well as continuous upgrading.

## **2. Programming language after the automation project 2004:**

During the work of the Ministry in the development of software programmers to developer 2000 (MASAQ project) started, developed programs and web languages was advanced VB6 the first of these languages, which has been designed system (Mizan) on the basis of which in 2004. This, however, the system did not meet the ambitious central in full, and the necessary security for the use of local companies to remove the central system to full language for C# & VB.NET in 2007 to start the system in 2008 and continues until now. The following are the characteristics of the programming language after automation system according to the following items:

### **2.1. Security and protection:**

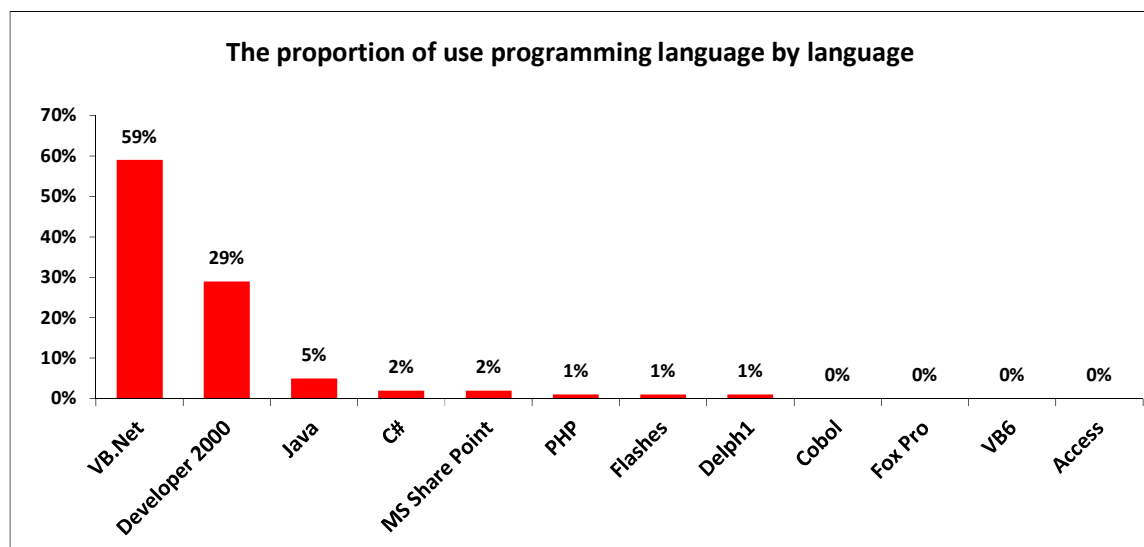
Security depends on the programmed in the programming languages, it must have a policy of safe so as not to be a breakthrough software, especially after the adoption of programs to become Web basic systems in the ministry, which necessitated the use of techniques such as encryption software, and was linked to the medium security software programs such as ISA and the adoption of safe designs in software to become multi tier .

### **2.2. Application interfaces:**

The ministry is currently used in a number of programming languages are: developer 2000, vb.net, C#, Java , php, flashes, Delphi, Ms SharePoint.

### **2.3. An analysis of the capacity:**

Note From The graph below that the language of software vb.net is the most commonly used languages followed by the language of the developer 2000 and review the ministry's achievements in software we can note that a staff Ministry developer proficient in 2000 for the language for C# & VB.NET most software was in the hands of foreign companies often and its staff is still limited capacity in the area of programming vb.net.



#### **2.4. Expected Growth :**

On the basis of the globalized in the Ministry of Justice, the slow growth and development required unexpected access to him.

#### **2.5. External / Internal contracting:**

External contracting is the software is not on the programming languages, but there is a contract between the government and some global companies licensed to provide programming languages most languages of Microsoft, as well as continuous modernization.

#### **2.6. Interaction with other governmental agencies:**

The issue of linkages with other institutions is a matter of pressing the link with the civil service and the water conditions and Gary on the link with company's observation. In addition to indirectly linking with the Bar Association through the periodical transfer of data. Which requires action on the development of the languages support web services such as Java and ASP.NET and use DB connection.

#### **2.7. Licenses:**

The coverage was handled by the national center for information technology; there is no physical burden in the ministry.

#### **2.8. Programming languages lifespan:**

This issue is governed by the ministry for as long as the language is working and giving good performance then there is no need to change it, but the reality requires keeping up with technology and upgrades

#### **2.9. Cost:**

### **3. Challenges and recommendations in the area of programming language:**

#### **3.1. The main challenges and problems:**

The main recommendations in this area is the work on the unification of programming languages and reducing the diversity and expansion because that is a big burden to the programmers at the ministry in the case of the multiplicity and diversity of programming languages.

The main challenges facing programming language adopted in the ministry is the capacity to develop software and keep up with updates, also the ability to deal with errors in both the system and processing. In addition, there are several challenges facing future programming language development summarized as follows:

1. The extent to which the ministry is ready to provide the necessary budgets to develop programming languages and updates to keep up with the maintenance and follow-up. and self-reliance in the case of the external support from local companies and projects.
2. The extent to which the ministry is ready to attract qualified in the area of information technology programming language programmers for the large number of programming languages requires extensive and varied capacities.
3. Provide training programs for training and rehabilitation of staff of the ministry to build their capacity to manage the regulations in force and to alleviate the use of external expertise. Physically, motivating staff and attracting specialized competence in this area.
4. The ability of programmers to use advanced programming language to issue reports supported by graphs help decision-makers to take their decisions on the basis of scientific facts and help them on strategic planning for the development and modernization.
5. Fear of the consequences physical and moral implications of the change of programming language material cost resulting from the change in the quality of the devices and equipment, as well as to the lack of qualified human staff to lead the new language and deep knowledge characteristics and peculiarities and benefits compared with existing languages.

There is no cost for programmers and programming languages lack of investment in this sector, but in return, go to huge contracts with companies in software development.

Governing this matter function for the ministry, as long as the languages used lead all what is required of them, there is no need to change, but the fact is that keeping up with the latest developments. At the same time, it was the work of these systems were required software is centralized systems are safe. The programs of the ministry which is currently in force, it is expected to be deployed on the Internet and will be the need to use technology to serve cellulites bailiffs lawyers and the public. This threatens to programming languages receded during the years and the need to catch up with development.

### **3.2. Main recommendations:**

The following are other recommendations in this area:

1. The need to work on creating a system of incentives for material and moral programmers and others to improve their competitive position with programmers in the private sector to prevent the American Citibank to this sector. Also featured attraction experiences through individual contracts.
2. The training programs reflect the ongoing training needs in accordance with the nature of their work and keeping pace with new developments to the software.

3. provide budgets necessary to follow up the process software maintenance and strengthening the security of the information.

#### **Fourth: Software:**

Programming is the set of commands, write, according to a set of rules set out by programming language, and then pass these commands in several stages to be implemented on the computer. Divide programming languages at the proximity of languages to humanitarian of high language level (close to the language that is understood by human beings) (such as low level language and Java language assembly and close to the machine language).

Sometimes software is divided on the desired uses of the language used. There are languages that are designed to operate on certain devices, such as the company is the producer of a computer or (CPU), and provides a guide to the use of the commands that are implemented, there are other languages more generally operate independently of the machine type, i.e. it is working within the Virtual Machine virtual machine, such as Java language

#### **1. Software before automation project before 2004:**

Prior to the commencement of the MASAQ project, the Ministry of Justice had started to work in the program to automate some office work in the ministry, by providing some staff computers and printers to print official correspondence internal and external processing system using words, began to use the computer operations department in the Ministry of Justice in 1987 install computers (VMS, cobol /dibol) automation applications human resources and payroll.

The system serves the administrative sections (personnel, salaries, expenses) in the ministry using peripheral displays the number of users of no more than 15 users, however, that the ministry staff in that time with a few of the ambitious, then some of the programs that served the ministry in some sections in some circles such as rents, courts, handicrafts, civil service and the Attorney General, which was an important influence, but he was limited.

After 2002 the ministry started using administrative systems are programmed to Oracle developer 2000 , which uses Oracle database has been purchased from the Royal Scientific Society, the number of users of no more than 40 users, but this has prompted the Ministry on the formation of a staff of special programming and training to develop similar systems the Ministry has succeeded in receipt of these systems maintenance contracts ended, where the maintenance is becoming a pool, but the courts remained non-automated until 2005. However, there have been several attempts in 1998 to buy systems using courts but Company assignee by the system failed to recognize. The following are the main characteristics of software automation before according to the following:

##### **1.1. Protection and Security:**

There was no electronic data needs protection, financial and administrative regulations, which is confined to one server and a few users, and the Internet was not available at that time and was not to any danger.

But the data files in paper issues were in danger of accidents or theft or loss of burning.

### **1.2. Application interface:**

application interface management systems before 2002 was the language of COBOL, and the operating system VMS was therefore modest means, both in form and content and many screens and not complex. As for the programs that have been designed by the Ministry programmers have been designed to FoxPro and access and use Windows 98, therefore, was more flexible. After 2002 became programming on the Windows 2000 Operating System programming has become the language of the developer 2000, making screens easy to the user and more flexible (user friendly) also increased assistance screens and become processing reports, review is more easy and user-friendly.

### **1.3. Analysis of the capacity:**

The ministry did not programmers at that stage trained enough, but that they are able to keep pace with developments which the Ministry delivered with dispensed and with the full maintenance contracts.

### **1.4. Cost benefits analysis:**

Not the software costs before the Ministry of many, but very few have bought the system administrative systems in the beginning of the 1990S and bought the ministry in 2002 and was not huge amounts, and contracts for the maintenance of the software and contracts with foreign experts, but the ministry was usual staff has to bear responsibility for this software.

### **1.5. Expected Growth:**

The process of development of automation systems in the courts is not essential, but there is no plan, but the insights and ideas without scheduling or planning, but the weak automation in the courts was paid about a major change in the systems and software because the gap between the need and reached the Ministry very large.

### **1.6. External contracting (procedure:**

There is no external contract for software and there was no need, therefore only staff of the ministry were needed to maintain computer software, because there were few and easy to manage.

### **1.7. Interaction with other governmental agencies:**

As there were no systems at the courts, it was natural that there was no link or electronic interaction with other governmental institutions.

### **1.8. Licenses:**

There is no software licenses, as they have been purchased one time as they were designed for the Ministry for unlimited number.

### **1.9. General Maintenance:**

The maintenance in the beginning to be carried out in coordination between the company that the Programming section staff computer systems specialists, after a period of staff gained sufficient

experience problems solution mechanism to deal with the problems of these systems maintenance and then became easier.

**1.10.Notification:**

The existence of continuous backup for software so there was no danger of the viruses or malicious damage, in case of danger and this did not happen, a copy of software backup is smoothly retrieved from its location. But true danger lies in the paper systems that are still used without any chance for electronic saving, which increases the risk of loss.

**1.11.New tasks and skills required:**

In the absence of any real technical complexities, there is no need to any competencies, skills to employ it in the Ministry of Justice.

**1.12.Compared with other States:**

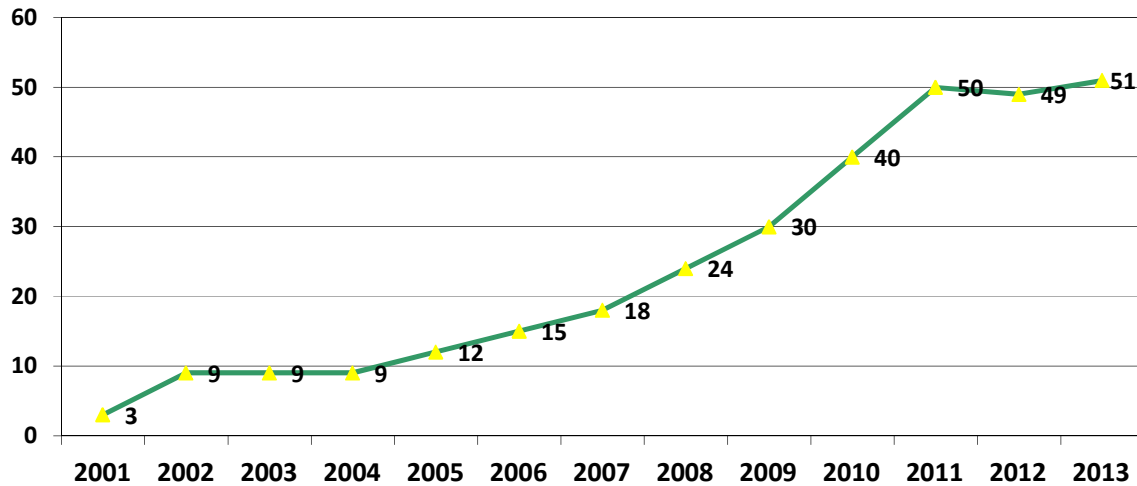
Despite the fact that the kingdom is considered a pioneer in the field of knowledge in technology and has qualified scientific competencies, but that this privilege was not enough in the relatively high cost of a project to automate the ministries.

**2. Software after automation Project 2004:**

With the MASAQ project in working with the Ministry of Justice started serious efforts to automate the courts Java Company in cooperation with the program design system proceeds Mizan of 1 programming language VB6 Oracle database has been considered this system a qualitative shift in the courts. This, however, the system was not centrally located and therefore was not central offers reports and that this was the need for additional efforts to backup in each court, and presents data at risk. required the need and necessity to create an electronic system allows Central Ministry reports central retrieval, as well as providing a safe and secure environment . It has therefore been the design of the program on the programming language for C# & VB.NET programming has started in 2007 and has been assigned to local company to prepare the program. The program was started at a cost no more than 200 thousand dollars after the required improvements for purposes cover all the needs of the work in each year , the total cost amounted to approximately \$2 million at the end of 2012.

Work has started on the program of Mizan-of- (2) in 2008, started to enter the data, which allowed after several years of giving an opportunity to begin to think about Electronic Wrapping with foreign institutions, the first of the institutions of the land and buildings as well as water authority also gave an opportunity to create an electronic query site for issues to serve the public and lawyers in 2009.

**The size of the software development during the period between  
2001-2013**



efforts began to try to establish the pool serving heads of the courts and the judicial system gives readings from Mizan-of-in the form of Reports supported by fees (dashboard) 2010 cost 176 thousand dollars, but after its launch has suffered many problems and was not at the level required were off 2012.

In another attempt to meet the demands of the judicial system has been the establishment of special staff for 2011 and cost about \$80 thousand after its launch was not adopted because there is no link between him and the salary system used in the Ministry of Justice has been off 2012, especially that the company that created it had liquidated its work there is no local support for the system. The following are main features and characteristics after automation project according to the following:

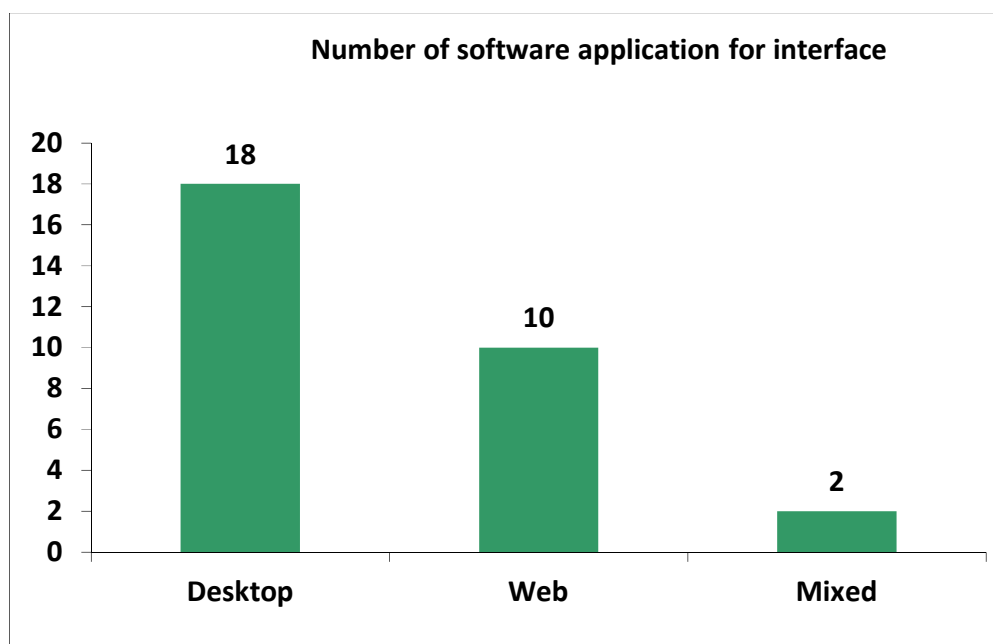
### **2.1. Protection and Security**

Characteristics of existing software in the judicial system, the Ministry of Justice is a centralized system for keeping data on a high level of security devices are doomed to prevent security access to non-specialists and protected self-off devices in case the fire, and power supply in case of disruption in electricity, and special adaptation to save the temperature devices. It has been providing the firewalls to prevent infiltrators (hackers) to penetrate the systems data theft or destroyed or tampered with, and the distribution of contraceptives to the servers (core switch) in the event of a failure of any of these devices will automatically transfer. Protection has become safer paper-based documents to provide electronic copies in Mizan-of-archiving systems. Use the systems are programmed for the security of data encryption method, the entry and exit systems mediation user name and password in the terms of reference were also the work of specific regulations structure Prevents users or hackers from the ability to access the database and servers systems (web servers) only legal way was the use of Web services in entire applications.

### **2.2. Application interface:**

The lack of a uniform policy on systems that have been purchased and determination by the Ministry and the MASAQ project led to wide diversity in application interfaces in the regulations, where there is a fully

Web systems)Any work through IE) also in the affairs of the judges and dashboard and others working on the desktop (desktop) and the administrative regulations and mixed (mixed) consists desktop linked with Web service and in the Mizan of and desktop I/O Web queries and archiving in the courts.



### 2.3. Analysis of capacity building in the field of software:

The ministry staff enjoys good capacity in systems management and development ministry, whether administrative or financial systems and some courts demarcation cashiering and other secretariats. However, the inability to the required language development programs to the courts in the Mizan-of-and are accommodated makes their ability is limited to the needs of the ministry, and that Sir vigorously to try to bridge this gap, but the access point required seem to be somehow far.

#### The ministry staff relationship software system established by

System	Support
Management & financial	The ministry staff
Publicity of statements	The ministry staff
The Training Section	The ministry staff
Work hours system	The ministry staff
The ministry archiving	The ministry staff
Mizan v2	Local company
Judicial Inspection System	The ministry staff
Execution accounting	The ministry staff
Accounting System & demarcation	The ministry staff



Courts archiving	The ministry staff
No conviction certificate/ not condemned	Local company
Legal affairs	The ministry staff
The courts Diwan system	The ministry staff
Staff Services	The ministry staff
The supplies system	The ministry staff
Judicial Record/ Register	The ministry staff
Investigation committees	The ministry staff
Social Security Fund	The ministry staff
Internal oversight and monitoring	The ministry staff
The deposit system	The ministry staff
Juvenile BI system	Local company

#### **2.4. Infrastructure:**

Calls upon the application of the central system that caters to all the courts of a computer and a printer when all the judges follow-up book, pencils, warehouses, notaries, and implementation and called for the Ministry to raise the number of devices 800 a computer to the 3000 as well as the 2500 printer, as well as optical wiper. On the one hand, and the other calls for a network of up between all the courts to become fully coherent and servers in all the courts in a number here to 120 FIFTY-server server in computer center and four of the server computer center alternative. which impact on the cost of the required maintenance and lifting the ministry to large sum of money, not to mention the need to ink that exceed 300 thousand dinars annually.

#### **2.5. Interaction between the Ministry, Council and the courts:**

The Regulations of the Ministry of Justice are interrelated, the system internally strong Mizan-of-tied with archive system with a system that are accommodated accounting system, and the system of Mizan-of-serve all the courts of a notary and implementation issues, which has helped in this interdependence of a consolidated database for all.

#### **2.6. Response Time:**

The process of correspondence and the exchange of documents, take the time between now and send written correspondence, is through electronic mail , which provides the time and effort.

#### **2.7. External contracting:**

It is clear from the external contracts in force that the system of courts of Mizan represents the greatest challenge in high-cost because of its complexities magnitude, while the remain ing contracts easier in dealing and it is possible to be terminated in the case of the presence of sufficient staff in the ministry. The MASAQ project bears the cost implications of the program of Mizan-of-with the development, maintenance and updating, which requires finding alternatives or bear the cost in the future in front of the Ministry of Justice itself.

#### **The cost of the actual maintenance software systems contracting companies**

The cost of the maintenance	The company	The system
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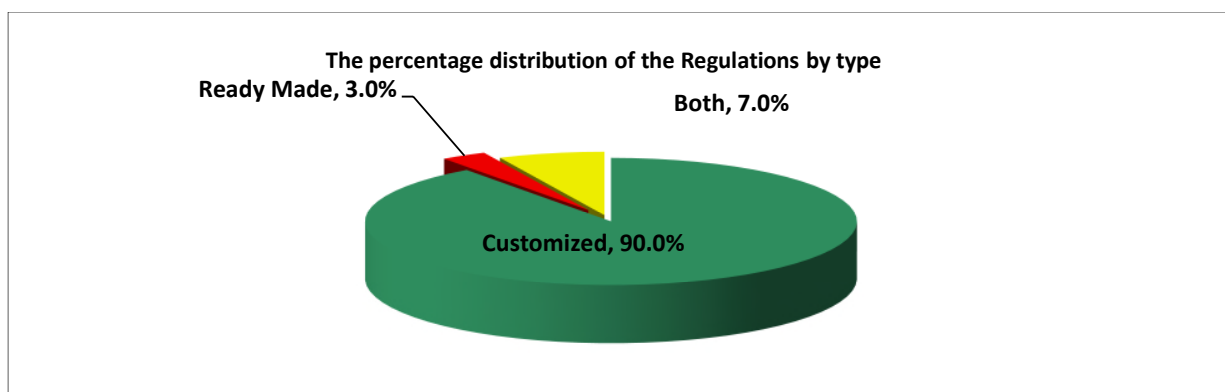
10000	CCC	Working hours system
10000	Company sources	The ministry archiving
150000	optimiza	Mizan v2
10000	Canon Bci	KIOSK
15000	itec	Courts archiving
20000	optimiza	No conviction/ not condemned
3,000	optimiza	Juvenile BI report system

## 2.8. Interaction with other governmental agencies:

There was no link with foreign circles and regulations only, it also to link with external institutions such as: the Bar Association, the civil service, land and buildings. The system was made available on the Internet to inquire about special offers available to the public, including lawyers, query, without the need to attend to the Court. The ministry works with the MASAQ project together now working hard to complete this link with other institutions, such as: the Department for the control of the Ministry of Labor and Dar-Al-Salaam medicine, food and security, and to provide the special system can link with any institution through the provision of secure web services with specific terms of reference of institutions, according to their competence.

## 2.9. Licenses:

The mechanism for software license varied according to its kind has been purchased the systems in the ministry , a customized system, except for the ministry and archiving always courts has been purchased licenses for each of them meet the Ministry for the future and there is no need for an annual license. But certainly there is no contracts support has dispensed with the ministry so that these contracts were no longer in need except archiving system the courts, which is still working contracts of the magnitude of the complexities of the system and its sensitivity.

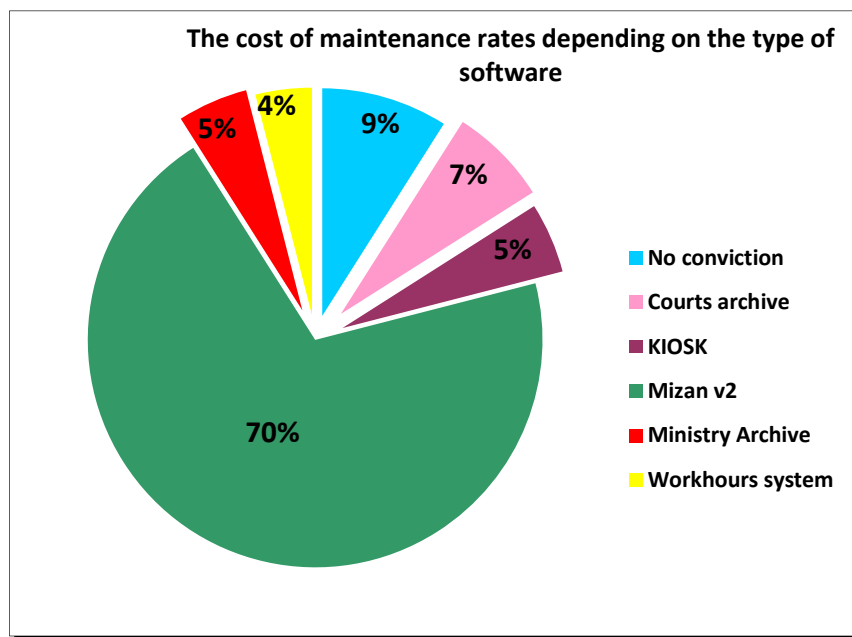


## 2.10. General Maintenance:

Maintenance is determined by the mechanism of action by type of area and seriousness of the problem, if the problem of dangerous and urgent to be addressed quickly and gives priority to the need to provide a form to study the problem and identify its region but be documented directly after resolved to inform all parties concerned. On the other hand, if the problem is serious but non-urgent or non-hazardous, rendered the problem in the form of a request is studied and to assign the appropriate person to deal with the

problem. After dealing with the problem will be codified and inform those involved in it. Software for the ministry prepared by the maintenance is always a staff of the ministry. The software purchased from external parties often coordination is to solve the problem between the Ministry and the company concerned staff.

The increase in the number of systems purchased from foreign companies the burden on the Ministry of Justice and the Government of Jordan is required costly maintenance contracts with these companies.



## **2.11.Crisis management:**

The reporting of error tolerance in a systemic and within certain mechanism through the Maintenance section located in the courts with the reasons for the failure of the devices, and then to the quality control and maintenance section located in the Ministry in coordination with maintenance section located in the court and work to repair.

## **3. The problems and challenges in the area of development and modernization software:**

### **3.1. The main challenges in the field of software:**

The main challenges in the area of the programming in the Ministry and in the judicial system is the ability of human staff to accept change working methods of work and procedures, transportation of manual work to Work Email and understands the necessities of this change and support and preparing for it. The following are a number of other challenges that accompany automation project:

1. Provide full knowledge of automation requirements on the one hand, the infrastructure and facilities and type of software for the provision of staff qualified human to achieve this requires a comprehensive diagnosis of the reality of the system and identify the citizen weakness and

strength and opportunities for modernization and development and a plan of action specific objectives and clear and achievable.

2. Convinced of the usefulness of the automation project as an instrument for the implementation of modernization and development of the highest levels of decision-making to a minimum.
3. Enter Electronic Programming requires review of some laws into line with modern electronic systems.
4. The ability to allocate budgets for investment in the area of automation and programmers who are able to implement and manage the stage. Where are increasing total cost and maintenance software following reasons:
  - The lack of adequate studies and planning before and during the design of the system, which required many amendments to the system during and after implementation to meet the needs of the courts, and circuits.
  - The emergence of the need to link with external institutions such as the land, lawyers and other civil status and with other systems such as archives, accounting system and other, which recalled the need for substantial amendments to the system.
  - The lack of a uniform policy to link with systems and institutions we have major adjustments to the software, and to insist on the full linkage with all systems foreign institutions has increased the demand for these amendments.
  - The dis-involvement of the Department in technical supervision of these systems did not give sufficient opportunity to be able to have its programmer handle development and update of the system, in fact, they were surprised by the existence of huge system that is difficult to receive or amend.
  - that limiting the ability of the system to the development of the Mizan of the local company has compelled the ministry, along with one of the high costs of development on the program, especially with the reluctance of other companies competition to the developments and perhaps the reason is because of the lack of willingness to risk in the development of the program for an unknown to them this is limited to the Ministry in the need of the company.
  - Interest in the system and the luxury of ignoring requests can be overcome.
5. The lack of a vision of a clear strategy for the future of the Mizan-of-to face developments on the judiciary, especially in light of the increasing demands of the application of the comprehensive reforms in this vital sector, specifically in the area of case to find specialized courts and the court of constitutional, administrative and the two stages and issues relating to the support of the independence of the judiciary and other.
6. The lack of specialized bodies to analyze in depth data and statistical indicators performance indicators, diagnosed with the efficiency and effectiveness and the functioning of the judicial system and writing periodic reports decision makers to help them in future policy-making and planning. In particular, and that the Mizan of dealing with huge information and data are not used very little.
7. The lack of regular and comprehensive survey of the needs of diverse users of data and information and develop the system to meet these needs, the need for such information and data are growing and evolving Day after day the quality and quantity in a way access to appropriate speed.

8. On the one hand, the lack of an approved supervised to check the input data on the system to make sure of the accuracy and to identify the size of files to accumulated waiting for input in order to provide information and data minutes for an audience of users as soon as appropriate.

### **3.2. The recommendations in the area of development and modernization software:**

To develop and improve the performance of the courts and departments and solving the problems that impede the progress of work and progress toward a better, requires providing accurate reports based on the data and data are correct reflect the reality in the abstract, and decision makers to be able to take right decisions to develop realistic solutions to problems and overcoming challenges. It is in this spirit that the idea of the work of the dashboard specialized judicial and one of the President of the Council of Heads of the courts and other judicial inspection as well as the Minister and the secretary, each according to its competence and interest. This requires action also on the following:

1. The need to work on creating and training crews of the Ministry of Justice in the Directorate of information technology, to manage software systems, in particular information technology in general, in order to dispense entirely on the services of devolution of powers required them in decision-making and policy formulation and plans for the development and modernization in the area of information technology.
2. monitoring of budgets adequate and sustainable
3. Find a uniform method to link with institutions and regulations, and do not need an amendment to a lot or do not require an amendment to the Mizan.
4. provide a mechanism to link consolidated with external institutions each according to its competence and need to include public security and the Ministry of Labor and control companies and other institutions.
5. Provide a system on the Internet services offers much more to meet the needs of the Lawyers and the public, there is no forced all of them to address the court in pursuit of information may not be able to access in the end, this paper will provide the expenses petrol expenses and inks and pressure of auditors.
6. Coverage of the rest of the constituencies that are not automated such as: deposit box and rents.

## CHAPTER FOUR

### Case Management software (Mizan Program)

#### **General Background:**

Mizan program is an electronic integrated management program to manage the proceedings of judicial, penal and human rights, and follow-up to all actions related to the proceedings from the moment recorded in the Registry of the court until the final part of proceedings .It includes issuance of notifications to the parties of proceedings and print records of meetings, preservation and storage, printing and different correspondences based on a decision from the competent judge, cases follow-up about challenge for the two courts of appeal or cassation.

The process of building and developing the program of case management known as Mizan Program has passed through phases for about 10 years of work, experiences. Building process of reconstruction and development faced many difficulties and obstacles which have been overcome.

**First stage: assessment and analysis:** forming a team of legal programs working in the Ministry of Justice and judicial Council on analyzing procedures of the courts on the basis of laws governing the judicial work, put in a template for purposes incompatible technological specificity of judicial work and the nature of the court proceedings. Where was the setting of priorities and levels of security to ensure the ability to save information and forming a preliminary version for use in some of the courts. It was limited to register proceedings electronically and issuing notifications related to it only.

**Second stage: Building Mizan Program by issuing its first version:** After the success of the system (the Department of the proceedings) in the first stage, as a result of the capacity of the program to increase the effectiveness of judicial work, it was decided to move to the second stage through development of the program and to circulate it to all courts. The program included civil and penal proceedings. It also meets the needs of the courts of cases where registration and communications and reports and print records of meetings electronically. However, the system in this stage is confined to uses of the courts without any link with the relevant authorities' judicial affairs.

**Third stage: building Mizan program by issuing its second version:** the elaboration of clear strategic vision to build new copy of the program (the Department of proceedings (called the program (Mizan 2), in order to overcome all problems encountered in applying the program management of the proceedings. Mizan program has become a central database linking all courts are to each other as well as with relevant authorities such as: Public Prosecution: exchange of data on criminal proceedings. The Ministry of the Interior Civil status: exchange of information and private citizens. Bar Association: exchange of information of lawyers practicing their profession and others.

**First: Diagnose the reality of case registration before and after the introduction of Mizan Program in the judicial system:**

#### **1. Diagnose registration of proceedings before the introduction of the Mizan Program:**

Automation of the work of the courts before 2000, courts had not started in the use of computers, where the records of the meetings were handwritten by clerks, and in some cases be printed using Microsoft Word , and it takes time and effort and minimize the number of meetings that can be terminated in one day, also lead to the difficulty to modify the record if discovered in which no error. provide a copy of the record paperwork delays chapter in the issues in the case of loss of the record.

Notifications were handwritten, and more than a copy using carbon paper, which consumes time and effort, especially in the preparation of big notifications. Usually, the record name, address, is not clear, which lead to the failure of notification because of these errors. The following are diagnosed in the field of the registration proceedings before automation of the work of the courts:

### **1.1. Registering proceedings and notifications management:**

The process of registration proceedings before automation in various types of courts are complex and slow process, due to the difficulty in dealing with old paper records, there was no reference or any reliable source could be adopted for the data proceedings when recorded. The process of issuing notifications process in the courts that consume a lot of time and effort. Because in every stage of the case was to be issued for the communication of each party in the case of a marginal, that is, if the parties in the case of, for example, had to be the issuance of ten notifications each party communication, which makes it difficult to follow up the case and slow process. The breakdown of the process of registration and the issuance of notifications and fraught with problems of automation prior to the following points:

- The lack of a unified and integrated registration numbers in proceedings and addresses of the parties and their lawyers, which led to a repetition of the figure, therefore, difficult to retrieve the file and the difficulty of finding the parties to the proceedings and their lawyers.
- The Register exhibition manual of the damage, in particular, the parties to these records that contain numbers, proceedings, which leads to difficulty reading their content .
- The registration officer enter the sequence of register roots by hand which leads the way in some cases to impact the error becomes all figures after Wrong sequence is incorrect, which makes the process of counting the issues are complex.
- Mobilize reported manually by reference to file the lawsuit, in order to extract the data relating to the parties which consumes a lot of time in the extraction of data from the file, and rewritten again. Also there must be a copy of each communication through the use of traditional carbons continuously.
- The failure to provide new files annexes proceedings which displays documents lost.
- Often the agenda of Judge disturbed because of the difficulty to know the meetings to be held by a judge in a certain period for adoption of the agenda hand grenades.

- Reviewing records of meetings manually by clerks takes time and effort and minimize the number of meetings that can be terminated in one day, also lead to the difficulty of amending the record if discovered in which any mistake. provide a copy of the record paperwork delays chapter in the issues in the case of loss of the record.
- In the absence of any actual applications on the computer, there is no need to contract with an outside any other company to carry out any functions of the definition of operating systems somewhat rudimentary and needs to a few of the experience, it was the Ministry staff are able to undertake this task.
- In the absence of any real technical complexities, there is no need to drain or skills to employ it in the Ministry of Justice.
- The lack of a backup for reporting to be with the record so that it is the only copy and legal.

### **1.2. The linkage between the courts and other institutions:**

The registration of issues of the Prosecutor is in the same chamber and then sent to Attorney General, and then to the court, where it was recorded in each stage of a new paper on the record, that the issue was recorded more than once, even after its resumption or marked the record once again the records of discrimination and appeal and the reason is because there is no link between these courts, where led to much consumption of paper records and a lot of time due to express the issue more than once.

- Interaction between the Ministry and the judiciary and the exchange of correspondence, documents and between them was carried out manually, and it should have a staff recruitment to write texts as well as sent to the person concerned. Where the process of correspondence and the exchange of documents, take the time between writing and send answer ranging between 3-10 days.
- Communications and exchange of information between the Ministry of Justice and other governmental institutions, paper, this procedure requires time and effort to accomplish, thus delaying official transactions and impede their completion.
- The lack of a mechanism for follow-up in all the courts to monitor and follow up notifications.

### **1.3. The time for action, storage and cost:**

Time spent in dealing with paper records, due to lack of capacity to deal with the register of paper during more than recorded (data access) for example: If there is a wide range of issues to be recorded and considered expeditiously, the registration process these issues to the Register should have been handled by one person only and one record only, which leads to delay the process of registration and falling by mistake in the sequence of numbers in some cases.

The follow-up process of the most complex operations notifications belonging to the follow-up to issues in the courts, in view of the importance of reporting from the legal standpoint, where the payment of



notification of matters affecting the decision at a certain point in the case, the larger the delayed payment of notification process there was a delay in the decision which lead to delay in litigation. Beyond the duration of the process of issuing and receiving notification and delivery and payment in some cases full month, and in other times when some of the issues the large number of parties such as the issues of common rights in reconciliation , making the process of Communication of all parties the process consumes a lot of time to prepare these notifications and make it official to provide proper and legal.

- The large sized paper records consume large storage space, compared with the service performed by, because, in each case once again recorded in different court, be recorded on the record of various.
- High cost, so that the records for a certain number of figures, which makes in some cases per year to be more than a record, which makes the process of access to information is a complex process.
- The complexity of the process of sending notifications and delivery: where the employee to send this communication to the Registry summary by reporters are delivered each communication of a book of the discharge, and sign the correspondent on the receipt and delivery of the Registry the correspondent Summary by the President of the pen to discharge book and then assign it to the official record of the notification as well as with the signing of the record on the receipt of this communication to discharge book, is the process of handing over notification after informing repayment in the same manner and through the phonebook discharge.
- The addresses of some notifications is outside the jurisdiction of the Court was to be sending these notifications outsourcing in order to conduct the necessary so that the process of receipt and delivery process competent courts was very slow and must take place only through certain procedures before receipt and delivery between the courts not to mention the time spent in the process of transferring these notifications to the requested.
- materials and tools used in the process of reporting and follow-up are: (books of custody, a paper reported ) these articles and other, which cost the ministry large sums of money, compared with the service provided by the few in which the above-mentioned, and also that the process of sending notifications between the courts had been assigned to the ministry large sums of money, and that if the party is on the one hand foreign address different from the territorial jurisdiction of the Tribunal, it was not to be of this court to send notifications through Aramex company which makes it to the Ministry of payment for this service to the company.

#### **1.4. The accuracy of the data:**

The accuracy of the data on the parties to the case of addresses and names and other data, which is difficult to access , but by returning to them, leading to the emergence of many problems such as the problem of the Executive Board, which was assigned to the Court the burden of registration and consideration and disconnected and follow-up of the Court, as well as difficulty in as well as the observations in full and the difficulty of access to it, because of the lack of sufficient space to Write Comments on the paper record.

The process of payment of notification before automation is manually, i.e. that the record was to explain its version, which leads to a lack of clarity about the line in some cases, which makes reading the content of the reporting process is a difficult, either for the follow-up to notifications by the supervisor and control was not in the form of flour, where some of the notifications are lost or damaged, which makes the process

followed by the supervisor is difficult, because of that, and each time he wants to verify the communication must refer to books of receivables to know the author of this report.

- The lack of data on the issues contained pending during the month because of the existence of more than a record of more than type of claim because of the presence of files contained outside the closet in other places. The Pending courts are counted manually or the adoption of the previous figures.
- The lack of data on the disposed issues within a specified period of time due to manual count of issues, which are disposed by the judge, the judge is chapter large numbers of cases in the last day of the month following the month in case an amendment to anything inside the file it is difficult to know the person who made the amendment which lead to easy tampering issues. Also allows any member of the staff of the Court to any file in the Court, therefore, loss of confidential information and privacy of litigants. (separate point )
- When the parties to manual records, there is no mechanism for proper data of the Parties.

### **1.5. Variety of records:**

The courts before automation depends on a variety of records for easy access to information so that it was in all the Registry there is more of the classification of the same type, for example, the Tribunal: the magistrate was criminal classifications as follows (parts, checks, agriculture, trade, health, a criminal fugitive, etc. ) so that it was for each type of classification of separate registry for the other has a single sequence, for example, there could be a case No. 3/2004 and 3/2004 health cultivation, this has led to the presence of more than **the paper of record** for the Registry, which makes the registration process very slow and increases the proportion of impact of errors in the numbering sequence of records.

### **1.6. Renewal of proceedings:**

When the renewal of the case in the past, the data is entered new case only as a number (Case renewed under number ... /... ) if the query on the new case was not possible to know whether the issue of renovated another case or not, which makes the line follows functioning of the issue very difficult.

## **2. Diagnose the mechanism of registration proceedings after the introduction of the Mizan of:**

The registrations process after the introduction of the Mizan-of-to the courts fast and easy and accurate at the same time. This is due to easy to deal with Mizan-of-screens and speed the completion of the work of the presence of more than Data Access and accuracy of data input and deal with it , because of the presence of a central database reliable.

### **2.1.Strengthening the linkages between the courts:**

Currently after automation system express criminal cases in the circle of the Prosecutor on the program of Mizan-of-upon arrival to the court , primitive. So that is not recorded again as it was in the past, but given a new number in the court without the need to input data in full, because of all the courts in a

central database through electronic communication lines, which facilitates the flow of the case to another court.

Low cost rates because of the non-use of paper records. He also said that the resumption of the case or distinguished become record once again without repeating their statements and the reason is the presence of electronic connectivity between these courts, where this led to the use of a lot of paper records and a lot of time due to express the issue more than once without repeating their statements.

## **2.2. Lower Storage space and time:**

Express issues on the computer led to provide storage space, which was operated by paper records. It also has become the process of recording the proceedings on the program of Mizan-of-quick process where it has become possible to express more of the issue at the same time, leading to an increase in the Court's productivity with the least possible time, where the registration process in the past is done by only one person and one record only, leading to delay the process of registration of those issues and to express issues sent to another court does not require a lot of time because it is recorded by pulling on the issue of the Court transmitted data.

## **2.3. The accuracy of the data after the work of automation:**

The funniest case data (addresses national figures and names Quartet.. and other) minutes to beyond the border after the work of automation reference because of the presence of (database) reliable, the existence of the program of Mizan-of- through which an inventory of existing official in issues as one of the Parties to the case and classify the groups to facilitate added and research on the related issues. It should be noted that the access to this information is easy, as can be accessed from the query by No. proceedings or through any of the entered data when recording. It also became the observations on the program as well as Mizan of easy access to it. It is no longer only the responsibility of the Registrar, it became possible to enter observations by any staff member that has the powers of the Court, whatever their size. The use of case files is limited to the judge clerk and a follow-up, which increases the protection of these files from tampering or even destroyed.

## **2.4. Standardization of records after automation:**

The records in the courts in the beginning of 2007, so that it is in all the registry of one single sequence, through the program of Mizan-of-for example, in the Registry criminal magistrate can be more than an employee enter the issues on the computer, the system will automatically numbered these issues without consideration of the type of these proceedings or reclassified.

## **2.5. Registration criminal issues and rights:**

After the process of automation of the work of the courts in the context of the program of Mizan-of- appeared many of the problems in the area of the application, the main of which is the lack of a link between electronic categorization of the accounting department and pencils express issues, as well as the absence of a mechanism to link between the pens and the court police stations in order to facilitate the registration process. Other problems are also emerged:

- The lack of registration check box displays in criminal cases to add the value of the check or dissenting or even a fine.
- The absence of a mechanism to copy the contents of the specific case of another issue, where it is and in some cases can be seen several issues for the same parties.

- Difficulty Update Recording Devices and their follow-up and main tained.
- The increase in the number of cases received is not matched by an increase in the number of staff members.

The process of electronic connectivity between sections of accounting, pencils and express issues and linking with police stations of the most important things that we must work by check box in addition to providing new registration screens in criminal cases to add the value of the check or dissenting or even a fine. to create a mechanism to copy the contents of the specific case of the issue of the other, in the case of multiple issues for the same parties. and an increase in the number of staff to keep pace with the increase in the number of cases of the Court.

**The reality of the diagnosis of proceedings before and after the introduction of the Mizan-of-in the courts according to area**

Area	The judicial proceedings before (the Mizan of)	The management of judicial proceedings after (the Mizan of)
<b>Express proceedings</b>	Express proceedings are complex and slow, due to the difficulty in dealing with old paper records	The process of registering the case after the introduction of the Mizan-of- has become easy and quick and accurate at the same time, easy to deal with Mizan-of-screens and rapid completion of the work.
	There was no reference or any reliable source could be adopted for the data proceedings when recorded.	The presence of more than one Data Access and accuracy of data input and to deal with them, owing to the presence of a central database reliable
	The lack of a unified and integrated registration numbers in proceedings and addresses of the parties and their lawyers, which led to a repetition of the figure, therefore, difficult to retrieve the file and the difficulty of finding the parties to the proceedings and their lawyers.	There is a unified system in the framework of a database to record numbers and addresses of the Parties, including proceedings prevents repetition in numbers of cases and easy retrieval of data during the search for the number or name.
	The Register manual stabilizer exhibition, in particular, the parties to these records that contain numbers, proceedings, which lead to the difficulty of reading the content.	The loss of any automated file, especially if the necessary precautions to main tain the security and integrity of data and copies of backup
	The registration officer to enter the sequence of handmade, leading in some cases redundancy figures, which makes the process of counting the issues are complex.	The figures electronically it is impossible to happen repeated in the figures or wrong sequence.
	Often the agenda of Judge disturbed because of the difficulty to know the meetings to be held by a judge	The agenda of the judge planned agenda electronic meetings and does not allow

Area	The judicial proceedings before (the Mizan of)	The management of judicial proceedings after (the Mizan of)
	in a certain period for adoption of the agenda hand grenades.	conflicting dates of meetings. The judge can know times of meetings is easy.
	Reviews record of meetings manually by clerks takes time and effort and minimize the number of meetings that can be terminated in one day, and the difficulty of amending the record if discovered in which any mistake. provide a copy of the record paperwork delays chapter in the issues in the case of loss of the record.	The records of the meetings immediately during the meeting and easy to modify the record in the case of detected errors and easily provide countless copies of the record, according to need.
<b>The notifications</b>	The issuance of notifications in the courts of the difficult and slow and consume a lot of time and effort because of the issuance of service of each party to the	The electronic notification version to all the parties to the proceedings is easy
	Mobilize reported manually by reference to the file of the case, to extract data on the parties which consumes a lot of time in the extraction of data from the file, and rewritten again. Also provide a copy of each communication through the use of traditional carbon sheet continuously.	Notifications can be issued electronically by reference to electronic files, and does not require re-writing data as long as they are available in electronic file. It also can print an unlimited number of copies.
	The lack of a backup for reporting to be with the record so that it is the only copy and legal.	Provide the number of copies only with the record according to demand.
	Send notifications between the courts had been assigned to the ministry large amounts of money, as that in case the address of the foreign party is different from the territorial jurisdiction of the Tribunal, it was not to be of this court to send notifications through Aramex company which makes it to the Ministry of payment for this service to the company.	Notifications are sent electronically to the courts or to any side with to ensure access without the need to transfer paper towel without cost in most cases.
	Payment of notification be manually, i.e. that the record was explaining to his version, which leads to a lack of clarity about the line in some cases, which makes it difficult reading the content of the reporting process, and follow-up to notifications by the supervisor and control was not in the form of flour,	Payment of notifications is electronically and can be followed up by the supervisor without reference to paper files, books consciences.

Area	The judicial proceedings before (the Mizan of)	The management of judicial proceedings after (the Mizan of)
	some notifications exposed to be lost or damaged , which makes the process followed by the supervisor difficult process because of it, and every time he wants to verify the communication of the must refer to books of receivables to know the author of this report.	
<b>The linkage between the courts and between them and the institutions</b>	Check issues of the Prosecutor in the same chamber and then sent to the deputy general and then to the Court at each stage are recorded on the register of new paper, the issue was recorded more than once, after it resumed or distinguished record once again the records of discrimination and appeal.	After automation system express criminal cases in the circle of the Prosecutor on the Mizan-of-upon arrival to the court, primitive. So that is not recorded again as it was in the past, but given a new number in the court without the need to input data in full, due to linking all the courts in a central database through electronic communication lines, which facilitates the process of flow of the case to another court.
	Interaction between the Ministry and the judiciary and the exchange of correspondence, documents and between them is a manual, requires a staff recruitment to write texts as well as sent to the person concerned. Where the process of correspondence and the exchange of documents, take the time between write-and-answer and send ranging between 3-10 days.	The resumption of the case or distinguished became again without repeating their statements and the reason is the presence of electronic connectivity between these courts, where this has led to the use of a lot of paper records and a lot of time due to express the issue more than once without repeating their statements. (different from the point which beside )
	It was for communications and exchange of information between the Ministry of Justice and other government institutions are paper, this procedure requires time and effort to accomplish, thus delaying official transactions and impede their completion.	In most cases for communications electronically and dispensing with the paper for communications without cost and without delay.
	The lack of a mechanism for follow-up in all the courts to monitor and follow up notifications.	FOLLOW-UP TO notifications electronically
<b>The time for action and storage and cost</b>	The time spent in dealing with paper records is due to a lack of capacity to deal with the Registry paperwork through more than recorded more than the entrance to the data.	Easy to deal with Mizan-of-screens and speed the completion of the work of the presence of more than Data Access and accuracy of data input and deal with them due to the presence of a central database reliable
	The process of registration issues on the Register	The process of registering the proceedings on

Area	The judicial proceedings before (the Mizan of)	The management of judicial proceedings after (the Mizan of)
	through only one person and one record only, leading to delay the process of registration of those issues falling into error in the sequence of numbers in some cases.	the Mizan-of- fast program it is possible to express more of the issue at the same time, leading to increased productivity of the Tribunal with the least possible time. The express issues sent to another court does not require a lot of time because it is recorded by pulling the data sent by the Court.
	The large sized paper records consume large storage space, compared with the service performed by, because, in each case once again recorded in different court, be recorded on the record of various.	Express issues on the computer led to provide storage space, which was operated by paper records.
	High cost, so that the records for a certain number of figures, which makes in some cases per year to be more than a record, which makes the process of access to information is a complex process.	Low cost rates due to the use of paper records (different point )
	The process of receiving and delivering notifications competent courts was very slow	Receipt and delivery notifications competent courts often are electronically.
<b>The accuracy of the data</b>	The accuracy of the data on the parties to the case of addresses and names and other data, which is difficult to access only through reference to them,	The funniest case data (addresses national figures and names Quartet.. and other) minutes to beyond the border after the work of automation because of the presence of a reference (database) reliable, the existence of the program of Mizan-of- through which an inventory of the existing official in issues as one of the Parties to the case and classify the groups to facilitate added and research on issues related to it.
	The process of payment of notification before automation is manually, i.e. that the record was explains its version, which leads to a lack of clarity about the line in some cases, which makes reading the content of the reporting process is a difficult	Enter comments on the program as well as Mizan-of-easy access to it. It is no longer only the responsibility of the Registrar, it became possible to enter observations by any staff member that has the powers of the Court, whatever their size. The use of case files is limited to the judge clerk and a follow-up, which increases the protection of these files from tampering or even destroyed.
	The lack of data on the issues contained pending during the month because of the existence of more than a record of more than type of claim because of the presence of files contained outside closet in other places. The Pending courts are counted manually or	The data on pending issues contained during the month more accurate account and ease the electronically without errors and the Court Pending is electronically.

Area	The judicial proceedings before (the Mizan of)	The management of judicial proceedings after (the Mizan of)
	the adoption of the previous figures.	
	The lack of data on the disposed issues within a specified period of time due to manual count of issues, which are disposed by the judge	The data on the issues during the month disposed more accurate account and ease the electronically without errors
	When the parties to the manual records, there is no mechanism for proper data parties	Check the data electronically through the consistency and restrictions imposed by the program on the nature of the input data and updated.
<b>A wide variety of records</b>	There is no more than the classification of the same type, for example, the Tribunal: the magistrate was criminal classifications as follows (parts, checks, agriculture, trade, health, a criminal fugitive ... etc)	The court classifications type of issues are automated electronic and room for error in these classifications whatever varied.
<b>Renewal of proceedings</b>	When the renewal of the case in the past, the data is entered new case only as a number (renewed Case Number ... (....) if the query on the new case was not possible to know whether the issue of the issue of the other renovated or not, which makes the line follows functioning of the issue very difficult.	Renewal of proceedings is electronically and easily through copies of their statements, as well as the easy query and whether the issue of whether or not renewed during New Number and easy to track the progress of the work of the case

## **Secondly: diagnosis of query and search and retrieve information before and after the introduction of the Mizan of:**

The information retrieval (information retrieval) remarkable development in recent decades, as a result of the steady growth of World Wide Web users need urgent to search the huge amount of digital information. In view of the evolution of the mechanism of the work of the judiciary big expansion in the number of courts in different degrees of specializations<sup>1</sup> wide spread in various regions of the Kingdom of the 73 court on the one hand, and the introduction of information and communication technology in the details of its work on the other. Is the urgent need to find ways to provide modern query information and services easily to allow access for all to the judiciary.

### **1. Search, query and information retrieval before automation of the work of the courts:**

#### **1.1. Query mechanism and search and retrieval of information:**

Before judicial system automation the query and search for information on any issue was the presence of references or lawyer personally to the Court by the proceedings. We must be aware of the issue, which is reviewing the number and type of review, then, the Registry of the Court and the question of the figure is to give the information in the Register and guide the buyer to the judge to his case, and then review the writer judge, who also works with the judge postage stamp. If the case is pending must be sought by the judge in a closet, and sometimes the file to the judge in another place if disconnected directed to the store and there is a search for the file.



This long and complex process was depleting the time references staff time in the search for files and extracting issues and documents. Matters are becoming more complex in the query on the issues in some cases where the party does not know the number or type of cosmetic case must be search in all pens in all records for the name of the Party to know the number.

The retrieval of information constitutes an additional burden to the employee in the courts and the Board of Auditors. Where to record the proceedings in the pen to paper record manual and then pass the case in follow-up, as any action on the case is recorded in a manual paper records only for example, notifications and requests to the proceedings and decisions, and there is no backup copy of any file can be adopted in the case file damage or to lose for any reason, which is confusing and problems several in the functioning of the judicial process.

### **1.2. The period of time elapsed between efforts to inquire and retrieval of information:**

In the past, the process of inquiry for any piece of information, both for the bibliography or counsel for a long time, from the extraction of information from the register manual passing officer and the end of the follow-up to remove the file from the store, if the case is disposed from the Treasury or the judge in the case was pending, and in some cases if the lawsuit reached at the court of appeal or other such execution service for a longer time than usual, therefore, the inquiry on the issue of what it will take more than two hours to 3 hours in normal and in other times take on full time. There is also the other problems and challenges have emerged in the process of query information retrieval before automation summarized as follows:

- The query and retrieve information through several part-time personnel for this task. The review will begin registration officer in the pen, which would need time to find the case required, and then be converted to an employee follow-up in order to know what action was to issue this stage requires time and effort, not simply because of the need to search in a closet judge of the file and then it is converted into action if the case is pending to the printer, or to a staff member in the warehouse will have been disconnected and if was to refer the file to any other party in this case is also experiencing a query other staff of the Tribunal referred to the case.
- In most cases a party need to know the date of the meeting and this command is not available in the past because this information is not recorded in the Register and manual should discuss the employee for the file to the judge in order to know the date.
- There is no officer or a particular device competent public service, but the query is through follow-up staff, causing pressure and confusion in the work.
- The Register paper was adopted before automation features (No. case, the names of the Parties and the judge) only. If not party known as Case No. It is impossible to find the file of the case.
- Problems of losing the file or loss of important documents from within the file, or the violation of privacy of litigants bring the secret documents within the file by external parties is not directly linked to the case.
- By virtue of their lawyers are the most needed to take advantage of the query information retrieval service work requires access to the service as soon as appropriate automation. before there was great difficulty in extracting information from the court , he or she has to go to the location of the Court itself and increases the difficulty if he had had more than one case in more than one location in remote areas.

- The courts before automation issues recorded in the Register manual paper records varies depending on the type of the Court in criminal courts, for example, there were more than 9 types of records (parts, checks, cultivation of .... etc) in all these records are repeated the same figures and therefore the references or party when it hits No. issue not be clear to him on any record.

## **2. Search, query and information retrieval after automation of the work of the courts:**

### **2.1. Query mechanism and search and retrieval of information:**

The query through screens on the program of Mizan-of-which includes all of the information relating to the proceedings such as name, date of original case ID and feature displays information about all the meetings that were held and the reasons for the delay in this case. The following are the main features of the automation of the work of the courts in the area of inquiry and research and retrieval of information:

- Lawyer can query the issues as soon as the site of the Court, without the need to travel, which provided the cost and time and effort.
- Through the linking of the courts there is the possibility of any citizen in any city to inquire about the case as soon as the place of residence without the need to attend court proceedings in which it is registered.
- The idea of a single Register (the register) cancel the repetition of figures in the same court, which facilitated the references and the Officer-extraction process information from the system and call the file from the warehouse.
- The public service has been introduced through full-time staff to answer queries contained both of the lawyers or the citizens and the use of screens to inquire about private direct from which without the need to staff, which facilitated the organization of work as well.
- There is no in search screens in the system the possibility to search for any piece of information in the case, including the No. focal point, which is easy to query the auditors has enabled knowledge of procedures, which was the case without knowing its number.
- Basic information proceedings to be registered in the pen and stored on more than one place, and cannot be lost for any of the reasons and can be retrieved easily via query or search.
- The print records in the Jordanian courts and still some of them suffered from the problem of the power blackout in the court, causing loss of the information in the record and the need to re-print and there is sometimes some witnesses have been listening to them and cannot be re-listening to him , which causes an Mizan in the judicial process, but now there is a folder on each device used by the printer name Mizan backup stores the last amendment to the record so that the printer will cut off electricity back to this folder and stored last modified without any loss of any information.
- Information stored on the system of Mizan-of- stored on the local server and server in major data Center any that this information could not be canceled or deleted whatever happened to circumstances.

### **2.2. The period of time elapsed between efforts to inquire about information retrieval:**

After automation of the work of the courts have been provided to serve the public screens in each court of the beginning of the can query the Case Number and scheduling of meetings and information, as well as fundamental to the existence of special section to serve the public in some of the courts in which there are considerable pressure to inquire about the issues. Apply Now archiving system issues where there is no

need for a bibliography or lawyer extract the file from the warehouse, but is to give the required information from the system without complexity.

In the case of the existence of the file in the other court such as appeal or the implementation of the program shows that the query is in the court of the file. The period of time to inquire in usual does not go beyond the "15 minutes" and in some cases the text of hours only.

### **2.3. The recommendations proposed development and modernization in the area of inquiry and research and retrieval of information:**

After the success of the system in facilitating the process of inquiry and research and retrieval of information and services to the public, whether they are staff members or judges or lawyers or auditors and provide the time and effort significantly. has become an urgent need in the next stage to provide service to the public without reference the court in case there is no need for the presence of the party or counsel in the site. And the best way to do that is through the website, which provides services query on the proceedings and scheduling of meetings and information of the proceedings or via short message service . There are also a number of recommendations to strengthen research and inquiry and retrieval of information as follows:

- a- The application of technology in the administration of justice is not only help to accelerate the completion of transactions and simplification of procedures, but also help to provide an opportunity to the public (in) the achievements in the field of application of justice for all and increasing confidence in quality of services provided by the judiciary.
- b- To strengthen the technical electronic management requires an amendment to agencies to adopt , for example, a legally binding electronic signature, so that the proceedings and declared by a certified among the judiciary, lawyers, and Agents and opponents, and they, along with the provision of electronic documents and exchange between the law firms as well as a copy of the Court, so as to adopt procedures for the exchange of electronic information and data and the signing by electronically, this will reduce the physical action exchange information through thousands of papers that require imaging, and exchange of information of the Parties to the case.
- c- The human element working in the area of information technology, both on the level of the Ministry or the courts of the different characteristics and skills in the framework of optimal exploitation of information technology and automation. In addition, therefore, requires improved levels of living so as to be able to compete with their colleagues in the labor market in the private sector to reduce leakage of qualified personnel from the private sector to the Government.
- d- Provide a range of electronic services for judges, the most important being the base of knowledge management laws judicial legal principles and provisions, which are a valuable tool for judges to facilitate their work and rapid access to the knowledge required to take appropriate decisions and judgments. And providing a range of services to manage their cases and sessions courtrooms and tools to measure their performance.
- e- The need to provide the courts lawyers query channels through a number of electronic services that help them in the follow-up to the issues of their offices to inform them of the schedule of meetings of their cases, as well as the follow-up to their demands which guest, making it easier for them and their time and effort in their work rather than the court review.
- f- Provide informational services to the parties to proceedings for information concerning their cases during the stages of litigation.
- g- Enable administrative decision makers of the follow-up to the work of their constituencies, their institutions and their query on issues of concern to them and help them in their work, and provides them with statistics and indicators performance to help them to take the appropriate

decisions.

**Third: Diagnosis of fact refers cases between judges before and after the introduction of the Mizan of:**

When express issues is distributed between the judges appointed to the Tribunal so that each judge of a number of issues are calculated upon the issuance of a decision of the Judicial Council to transfer Appointed Judge of the Court is to refer to other proceedings pending in this judge to a new judge or distributed between the judges in the court.

**1. Referral of cases between judges before automation of the work of the courts:**

**1.1. Referral mechanism before automation of the work of the courts:**

The automation of the work of the courts was collected unforeseen files belonging to the judge to change the ruling on the external file in most cases there will be files outside the court in other departments such as the Attorney General and implementation and appeal and not be transmitted only after its return to the court, causing confusion in the work of the Tribunal until the registration of such claims to judge and to begin its follow-up , which causes a problem Pinging these proceedings because of the knowledge transfer.

**1.2. The period of time for referral individual effort in implementation:**

Take the referral of cases to the judges in the court before automation great time and effort where you need the case to much time in manual work from the collection of files and changing ruling body and distributed to new bodies, which takes the work hours. As a reference more than one staff member and officer, and printer, as well as follow-up to full-time correspondent for the task.

**2. Referral of cases between the judges after automation of the work of the courts:**

**2.1. Referral mechanism after automation of the work of the courts:**

After the application of the system of Mizan-of-has become the process of transport and referral of a judge to another of the easiest operations in the court, and does not need any effort or time where refer cases of special screen in the system and on the screen of the "case file" of the inquiry which is easy to all parties (Judge, follow-up and revisers officer).

**2.2. The period of time for referral individual effort in implementation:**

Does not require referral process in all issues will have been referred to the body of another more than a few seconds in the case of assignment to more than the need to 5 minutes at the most. The referral process follow-up officer as stated does not need more than seconds of the work assignment and little effort.

**Fourth: diagnosis the structure and methodology of reports before and after the introduction of the Mizan of:**

Reports generally are documents dealing with a summary of the purpose of a particular document and the transfer of information and the establishment of facts and data and new ideas and proposals. Reports great importance of the judiciary, it gives a clear picture of the reality and the efforts being made to achieve the objectives and the means and methods used and the results and give a clear picture of the negative sides and weaknesses and strength and opportunities for further development and improvement.

The reports issued by the courts objective indicators of the volume and quality of its work during a specified period. Especially in the number of cases received by the courts, which has been separated from also reflects the size of the achievement and the performance of judges and staff.

## **1. The issuance of the reports before automation of the work of the courts:**

### **1.1. Mechanism for the issuance of the reports on the work of the courts:**

Before the introduction of the Mizan of the courts, there were three main types of reports submitted by courts at all levels of the judiciary and to the Ministry of Justice, which is as follows:

- **Report of the new cases:** reports of the courts per month showing the number of cases received at the court, cases are collected, which were received in the period of certain records to manually and collecting them for a number of the cases during the month in the annual report is collecting the figures that have been issued in each month to give number of cases received during the year.
- **Report of disposed cases:** the number of cases that have been disposed during the month, according to each judge is collecting all the files that have been disposed during the month of agenda during the judge and then collect figures issued from each judge is disposed is the number of cases in the Court during the month.
- **Report of pending cases:** it is collecting cases contained round of previous months of all records in the court and detached to be calculated pending cases next month (current recycling).

**1.2. The period of time of the process of issuance of reports:** the collection of data on the level of the Court requires a lot of effort, especially if the court, where the cases of each judge also disposed cases contained and sends the report to the Judicial Council and are grouped all courts. You need the process of issuing reports the mechanism used to two days until at least 3 days in order to collect information from all the judges in the court term varies according to the size of the Court.

**1.3. The problems in the area of the issuance of reports before the introduction of the Mizan**  
The reports are issued in this way is subject to errors calculations manually, as well as to the difference in the concepts of the cases contained categorizations pending and other cases. And accumulate errors from one month to another, especially in cases pending. One of the problems which face the lack of reports on the one hand, is responsible for the issuance to ensure the accuracy of the information and completed.

## **2. The issuance of reports after automation of the work of the courts:**

The program is available Mizan of large number of quantitative and qualitative indicators that can be analyzed and extraction of data base requires a Data Analyzer Play The ability to conclusion and draw lessons and writing reports decision makers. Also, the program provides an integrated list of all types of reports required by users of the system and users of data supported by graphs and does not need much effort to analyst only to give the operation of the database (RUN) to complete the report, whether a report daily or monthly or annually as required need. The reports issued by the rules of data accuracy, especially if the follow-up to complete the process of data entry and to ensure accuracy and credibility.

In order to verify reports of information system in supplying objectives decision makers in the Ministry and the Council judicial correct data and information that will help them to plan and improve performance. Requires specialized bodies or give powers quality section in the courts to assume the issuance of reports unified methodology agreed and also requires training in methods of data analysis and conclusions and recommendations.

**Fifth: diagnosis of the reality of the writer of justice before and after the introduction of the Mizan of:**

The writer of justice is the government department under the Ministry of Justice directly to conduct official transactions provided for in the Act and the issuance of the agencies of all kinds, as well as all types of guarantees and securities, including judicial warnings in various forms.

## **1. The writer of justice before automation of the work of the courts:**

### **1.1. The mechanism of the notary:**

Before the introduction of the Mizan-of- service was a writer of justice in the courts operate in full manual, where the references or lawyer to attend to the Chamber of the locality in order to issue the treatment needed by the notary manual provides a handwritten request decides the employee the required fees manually administered in accordance with the law is the relationship, pay fees references in the accounting department and attend manual hub to the officer shall be signed and stamped on the treatment to become official in the case of issuing a replica, the employee needs to search in hundreds of records to extract original transaction and a bibliography.

### **1.2. The period of time for the process of justice clerk special transactions and effort per capita.**

The time period required to terminate transactions on the type of treatment less types of transactions , on the one hand the issuance is to ensure that the identity of the civil status and need to almost a quarter of an hour. And most of the period the non-isolation and need in some cases to more than an hour in the case of a large number of parties.

The individual effort to accomplish transactions requires two staff members first is a writer of justice official, the signing of treatment and processing, and the second is a pastes all transactions in the special manual.

### **1.3. The problems of the notary automation before the administration of courts:**

The main problems and challenges faced by the notary before the introduction of the Mizan-of-resulting from the manual work the chamber and provide accurate information on the one hand full name and addresses and other national figures. The following are the major problems and challenges, other:

- a- Forgery of transactions where there is no means be sure of the person only through identification, which can be forged.
- b- About three-quarters of transactions judicial warning, issued by the Chamber back due to lack of precision in the addresses given.
- c- Difficult to find the employee in the extraction of any previous treatment and the lack of an effective system to facilitate this process.
- d- There is no archiving transactions are exposed to many different reasons lost
- e- There is a large role model, where the citizens and lawyers resort to justice clerk, known as they have to complete their treatment without an order.

## **2. The notary public after automation of the work of the courts:**

### **2.1. The mechanism of the notary:**

Guest automation of the Notary service fully where that any references or lawyer to review the service in order to complete his treatment starts book the role of the "machine " role , and is advocating the figure by the Clerk of justice without discrimination people of another and then check treatment and also incorporated in the system and print a warrant officer working on accounting in the same chamber. Where the accounting system linked to the writer of justice after paying the charges for the showing of a writer of justice that demand driven over his treatment without any other officer to interfere in its work and this is what ensures that confidential data protection and(the)Manipulation of transactions,

either for the issuance of certified copies the process is currently does not take more than minutes because of all the data archived enters the employee transaction number with the Year and shows a copy of treatment are printed easily.

**2.2. The period of time for the process of the notary public transactions & individual effort:**

The time period required to terminate transactions on the type of treatment and less types of transactions period is to ensure that the identity of the civil status and needs only about 5 minutes. And more treatment needed time to agency is non-isolation and need in some cases to a quarter of an hour in the event of a large number of parties. As for the individual effort begins and ends at the same staff member and there is no need for any other officer to assist in the treatment.

**2.3. The notary public department with other institutions:**

The main problems dealt with are the issue of forgery, where the notary public is linked directly to the civil status to make sure that the personal references to the chamber. Where information is entered on the minute you enter the names are largely through national figures are not to accept any treatment, but to bring the card to enter number so that national information very carefully. In addition, the introduction of the Mizan of easy-to-work in the circle of the writer of justice in the following matters:

- Judicial process has become notifiers warnings are more accurately and easier due to the accuracy of the information entered correct titles.
- The completion of transactions are quickly and smoothly and without delay because of the concentration treatment when one staff member and enter data into the system, in addition to the effectiveness of the system of the role in arranging the chamber and what was the mediations personal knowledge.
- When queried about any information or treatment is Enter the transaction number and Sunnis introduced by all the information required in addition to the possibility of extracting the treatment of the system has been introduced to archive system in the Chamber.
- Archived all transactions contained the Chamber on a daily basis, and this led to protect files and transactions of the Chamber of any loss or damage for any reason.
- This problem was solved by the introduction of the role and not to allow any references to go to a notary without advocating the number.

**Sixth: diagnosis the reality of the powers and protect the security of information before and after the introduction of the Mizan of:**

The Information Security providing protection to them from the dangers that threaten it, and activities of the attack. Through technical logistical means to find the tools and procedures necessary to ensure protection of information from internal and external dangers. And through legal means to protect the security of information and confidentiality and integrity and combat illegal activities and non-legal target.

**1. The powers and protect the security of information before automation of the work of the courts:**

There is no specific program regulates and defines the terms of reference of each user could any person using your computer judge or paper files, which was written by hand, and it was not any feature to protect the records of the meetings, notifications, attachments, and all official papers task and confidentiality that are printed or written manually or saved within the file of the case, and thus facilitate the process of theft and violation of confidentiality.

## **2. The powers, protection and the security of information, after automation of the work of the courts:**

There has been new screen is from which to determine the terms of reference for each user through distributing users into groups so that each group of certain powers that can be amended in terms of adding or deleting those powers. In addition, the program provides the following features in the area of protecting the security of the Information and the terms of reference:

- Each judge has a list of the Printer, Printers, or follow-up list of only those who have the power to see the amendment, printing and follow-up actions for the judge, and therefore no other user will be able to access and view the proceedings.
- The user can have partial powers on the same case such as read only, each feature has independent authority (read/view, add, delete, and modify).
- In al Mizan, each user is added according to their group and the name of his entry and password and is added only to the court, which is working and he can watch the rest of the courts.
- After the end of the work of any user, whether the end is final, or transfer to another court or other chamber, the Mizan may disable this feature, the user can be activated, suspended or disabled.
- For each user a password for this word must be a character code number at least one (@,\*, ... ) and that after each 120 on requests the program of the user that it must change the password , as well as to the possibility of change at any time this keeps the protection of accounts for the users.
- The program allows a mistake in an attempt to enter the name of the login and password only five times only after it is off the account for this user.

### **Seventh: diagnosis of the control and follow-up before and after the introduction of the Mizan of:**

The subject of the oversight is divided into four sections, namely: oversight of the work of the judges, and supervision of the work of the staff, and control of the proceedings and the work of the courts.

#### **1. Control and follow-up before automation of the work of the courts:**

It was not before the Mizan of any kind of control and follow-up of the work of the judge and staff of supporters on the one hand to identify their performance and completion with respect to chapter in cases of quantity and quality. Where the number of cases that are disposed by the judge during the month manually without identifying the type of these cases as difficult disposed from the date of registration and other. The data of the cases are not disposed precision and credibility because of the possibility of interference and change figures easily. The staff members who were assisting the judges in their work and follow-up of cases where the issuance of notifications and all the proceedings (writer follow-up) were carrying out work on models manually prepared in advance and they were always subject to cause mistakes in writing data and information.

Before the introduction of Mizan program, the registration proceedings be manually and did not have any kind of control and follow-up on the registration process on the one hand and the accuracy of the information was made available to any person found on the case papers and data.

##### **1.1.Oversight of the work of the judges:**

It was not before the Mizan of any kind of control over the work of the judge and the extent of its work was accomplishing reports contained chapter for judges and the Court may be calculated and recording manually, so it was possible to change those figures by any person responsible or at the request of the judge in terms of increased monthly disposed or not, the numbers task.



### **1.2. Oversight of the work of the staff:**

For each group of judges, there was a staff member interested in follow-up to cases of where the notifications and all the so-called writer proceedings follow-up was by typing notifications manually on the model prepared and equipped in advance and thus could be delayed in its work for any of the reasons or that they err regarding data and information case and therefore will not be user's knowledge or the writer who made the work.

### **1.3. Control over the proceedings:**

As mentioned previously, the control of any information in the case should be precise, so the Mizan of the Program before courts there is working on computers and some of them before this operation were working manually on paper, and in both cases, there was no censorship of any kind on the papers, the case was the data can be any person that uses the computer or to be informed of the proceedings and papers manual for any purpose.

### **1.4. Control over the work of the Tribunal:**

The agenda of the work of the Tribunal and schedules monthly and year-end of the work of the Court was to be issued manually either by counting proceedings or through Figures taken orally from the judge or the official was not any kind of censorship on the status of those figures accurately and thus the error in these figures is uncertain, which was leading to an error in the calculation of the completion of the Court and its work, as it would lead to an error on the level of the measurement of the completion of all the courts as a whole and on the statistical figures in general issues of reconstruction rates and other indicators.

## **2. control and follow-up after automation the courts:**

### **2.1. Follow-up to the work of the judges:**

control and follow-up to the work of the judges after the introduction of the Mizan-of- there has been Reports calculated automatically according to the work of each judge according to specific dates to the system, which are issued on a monthly basis, or according to the date the entrance full rigor, and therefore not of manipulation in those figures and even specific dates here can know the extent of the delivery each judge in transparency and sincerity and knowledge of the cases which the dismissal and the date of registration and other.

### **2.2. Oversight of the work of the staff:**

The control of the supporters of the work of staff in the courts that do not allow the program clerk in follow-up to any claim for any judge only if it has been determined in advance by user screens that Mizan within the group, as well as follow-up book that have been determined to work to a particular judge only, and thus would reduce the percentage of error or delay because there is a screen that appears when the judge or any person responsible to know the date and time of any communication or any movement of the guest on this case and show the name of the user or of the amendment and the date of any amendment, and this is the official notice that his work an observer, and therefore must be cautious and his work on the fullest.

### **2.3. Control over the proceedings:**

As for the control of the proceedings take place through the program of the Mizan of the existence of a report called report of movements of the case/request when enter the case showing all the movements

that was the case at the time of registration and entry to the program to the date of the search. It shows the date and time the movement in detail and the name of the user who work of this movement and detailing all the movement, which is working on the control of any piece of information in the case and any change can be changed.

There is also another report called report of administrative movements is used as a screensaver in case we want to know all the users who conducted the work of the movement, in particular through the choice of the type the movement can be selected and type the location of the Court and the date of the movement to and from if we are specifically more and reduce results search appears in the type of the Movement and the name of the user who in the movement, and the date and time the movement Case number/request details of that movement.

#### **2.4. Control over the work of the courts:**

The Mizan of the Program issued from which all the reports of the work of the Tribunal, a report of the agenda of the work of the Tribunal and reports detailed disclosures of cases, judges, bills, Books of restrictions) Records), it can be the issuance of the report of the agenda of the work of the Tribunal on a monthly basis or an annual search is displayed by selecting the settings as a result of monthly research fundamentals on cases pending from the previous month, contained during the current month, during this month, next month totals of those figures. As for the search for annual recycling appears year/Previous Month, contained this month in detail in each month of the year, and the total disposed of during each month, the proportion of disposed to contained aggregates of those figures. The figures are calculated on the work of the Court is automatic and will not be able to any person of changed so all true and accurate statistics and indicators.

#### **Eighth: Diagnosis of the confidential proceedings before and after the introduction of the Mizan of:**

There are cases which are classified as secret cases and of the Court only to order that the proceedings be confidential when thinks that morals or county, on the system, and is the non-binding by mentioning the reason, as is often juvenile cases of secret cases.

##### **1. Confidentiality of cases before automation of the courts:**

Automation before the courts are not what distinguishes the case secrecy on other cases, therefore, it was easy to disclose confidential proceedings at any time and watch them by any user or any staff member.

##### **2. Confidentiality of cases after automation of the courts:**

The Mizan differentiated between the cases, especially those that need to confidentiality and respect for their privacy, became independent when there are two options definition or add any new user program on Mizan-of-namely, watching secret cases and watch juvenile cases, if this option has been added additional otherwise able to user, such a person will be able to see this secret cases such as a printer, the judge or other users, and other users will not be able to see those proceedings.

Also, at the start of the registration proceedings confidentiality and incorporated into the program of Mizan-of-You must choose confidential proceedings (Normal, SRI, events) from the display express New lawsuit before starting to enter data proceedings to be distinguished and show their statements for general users. Upon inquiry as to the claim of the person does not have the power to see a message appears, stating that the user does not have the power to see this type of proceedings.

#### **Ninth: Diagnosis reality tracking files before and after the introduction of the Mizan of:**

This includes the system on a group of operations in which the management and follow-up to cases files within sections of stores and the Court, through the dispatch and receipt and storage of these files.

### **1. Tracking files before the courts automation:**

After separation of the proceedings and the completion of the work on the file of the case was sent to the Court and, therefore, to the depot will over the long years it was difficult to find the file takes a long time to search for some of these files may be damage or may be exposed to theft or arson or any other operation.

### **2. Tracking files after automation the courts:**

The tracking program files to know the situation of the case at the present time or after that is disposed from it except for him is to know the location of the file of the case and tracking all shape even in the warehouses, where the arrangement in any safe in (a) Any shelf in all stages of the life cycle the file of the case, but, unfortunately, is not the application of this program, but in one court, a court of north of Amman did not continue to work for lack of staff required to work in the courts. The challenge in this area is difficult to apply for lack of staff required to work on it.

### **Tenth: Diagnosis of the reality of administrative screens before and after the introduction of the Mizan:**

Administrative screens are those screens in which the solution of problems faced by the user if the error during the work on the case.

#### **1. Administrative screens before the courts automation:**

In the event of any error on the papers of the case or any action was corrected manually or be canceled without to know the officer, the amendment was this lead to legal accountability and inferred from this change.

#### **2. Administrative screens after courts automation:**

Administrative screens now on the Mizan of the work is performed by the users responsible for the work of the amendments or changes they currently service staff Mizan of in the Ministry of Justice, and they should be in any change requests only after sending the form prepared for this request form ( Amendment) which is available to the courts, demanded by the amendment the details of the amendment is required and must be the Request a site of the President of the Court or the Chamber of the user, and thus, any amendment would be with the knowledge of the President, which is the agreed or refuses, as it would be known as the amendment because of the amended the movement will appear on behalf of the user.

### **Eleventh: crisis management in the automation of the work of the courts (the Al Mizan program of):**

Easy Mizan of work program and helped to a large extent on its development, but despite that, there are problems that can be encountered this program such as power blackout, there is a problem in the program, and other problems in networks. Therefore, there must be a solution to all these problems that may face the user during work, and can be summarized as follows: Crisis Management Solutions

#### **1. If the problem caused by the power blackout:**

When the power blackout should be informed of information technology staff of the court and therefore it is possible to determine the cause of the problem and then decide how to work User manually or wait until back power. When the power blackout, the program of Mizan can save work up to the last moment of the work by the user, either during a blackout, some courts to resort to manual work immediately, and

others are expected to back the electric power, after it returns, it could be through the program of Mizan-of-the book figures that filled manually (during blackout) and complete the work on the program the first Powell and can in the end of the time or the time that they could enter the manually entered the program of Mizan.

## **2. Network blackouts:**

When network blackouts a message (Unknown Error) on the program of Mizan-of-beyond information technology staff must be informed of the Court then must solve the problem if the internal to the level of the court, but in some cases can be fully line is disabled and this is causing the failure on the part of all the courts, then must be the information technology staff of the Court , in turn, informed the Group that the information technology specialists in the subject of the networks of the Ministry of Justice by sending Emile official as well as to call for rapid loss of time after the solution of the problem must be a specialized team to networks that sends Emile staff of information technology in the court clarify the cause of the problem and how to resolve them, and then to inform users that the problem has been solved at least. In the case of network blackouts can also do not work on the program of Mizan-of-, then also have the option to the user that the work manually or the expected return of work on the program.

## **Twelfth: the Chambers of the implementation of civil and criminal law cases before and after the automation of the work of the courts (the Al Mizan program of):**

### **1. The implementation of civil cases before the work of automation:**

Different from the implementation of the rest of the Chambers of the Court, they include the registration and follow-up of cases on the one hand, accounting and financial procedures, on the other hand. These details before the automation constitute a burden on the difficulty of standardization of procedures for the courts, not to mention the accounting issues partial trajectory in the implementation procedures, which have made an urgent need for the automation of the Chamber. The following is a summary of the implementation procedures before automation angles:

#### **1.1. The decisions demarcation:**

The demarcation process is making a manual on the court's decision, it was written in a non-structured and random, leading to their exposure to risk in a lot of mistakes not to a certain mechanism and dependent Demarcation decisions, where the employee in some cases was located in arithmetic errors and there would be a mechanism to alert the employee by mistake.

#### **1.2. Organization of the Execution Procedures:**

The implementation of the courts are not subject to a specific scenario in work, but it was all a court to follow its own procedures, owing to the absence of accurate baseline can be relied upon, which creates a kind of confusion to auditors and users of these services.

#### **1.3. The time and speed of achievement:**

The process of implementation of the mechanisms that are slower than litigation, because of the need and necessity to more scrutiny and scrutiny of the action by the writer on the issue, which creates an atmosphere of tension and pressure so that the employee needs to take sufficient time to take proper and appropriate action on each case and its ramifications was the subject multi-parties in proceedings in some cases.

#### **1.4. implementation problems before the work of automation:**

The main problems that faced the process of implementation of a specific mechanism or electronic system help to standardize procedures and move from manual procedures to electronic. In addition, many of the problems in the implementation mechanisms are as follows:

- The time it takes to complete the procedures for implementation of a large quantity of very few.
- The lack of accountability program certified results can be trusted.
- The lack of a unified mechanism to all services of the implementation in the courts.
- The lack of capacity on the organization of work within the line of a specific and uniform within each service implementation.

In light of these problems and challenges recalled the need to design a program to facilitate the follow-up to operational issues and procedures, which are so as to cover all the details of the Program of Action, including on cases and matters, and financial accounting.

## **2. The implementation of civil cases after the work of automation:**

After the introduction of the Mizan-of-in the work of the courts has become very easy to follow-up to the implementation issues and procedures of notifications and at auctions and requests for procedural and other procedures fully automated, and easy to deal with and reduced to a large extent of errors in the implementation procedures and easy to avoid errors in the case of occurrence. Also, all financial matters related to the case shall be calculated electronically the system is that all of the accounts related to the case, which makes the percentage of error is non-existent, and can be summarized the implementation procedures after automation as follows:

### **2.1. The decisions demarcation:**

The process of demarcation of decisions made to, where the employee data mobilization on the demarcation of the resolution of the amount is doomed by the date of the start of the interest attorney's fees and charges and expenses and information bonds ... etc, any that the Officer-in-only the transfer of data from the resolution and filling in the boxes on the system only appropriate, ensures the system calculates the financial matters related to the case automatically, within equations programmed arithmetic and legal on the basis of it. In the absence of any of the data, the system alerts the writer demarcation that box designated non-filled, and if there is an error in the amounts entered the system alerts the writer of the existence of differences in cash payments and must be modified.

### **2.2. Facilitate the implementation procedures:**

Execution procedures have become automated program to Mizan of fully, and divided into two parts, namely:

- **Section I:** on the judicial procedures for the issue such as: (auctions,, booking, letters rogatory, left the proceedings, applications of procedure). If he wanted to references to take any action on the issue must be of a procedural request before the judge in the case the judge's approval of this request is to take action on it, bringing each request a serial number is linked to the number of origin of the issue so as to facilitate follow-up to such requests without the need to refer to the file of the case. It also offers the possibility of archiving these applications in electronic format. The issues are of a special nature such as the removal of common special treatment to the system complexity of its procedures, or the distribution of quotas sentenced them in removing the common issues in a manual process for a lot of time and effort, not to mention the falling in error, but when the use of the system in such cases makes this process easy and simple free of errors.

- **Section II:** on financial matters have all become Execution procedures automated financial system fully, such as deductions and common issues and the legacy of settling for inheritors boosted the convicted, sentenced them, income and expenditure. The system is linked to the accounting department in the court Wi-Fi financial process is on the case (payment orders, warrants of arrest) is accountability through the court, and not to take any action on the issue, without payment to the court accounting, which prevents manipulation in the amounts and fees on the issues.

### **2.3. The shortening of the time and speed of achievement:**

After automation became the Execution procedures and follow-up are easily, the automated system is designed to help a book Execution issues on accounting and auditing the errors and calculations, and these operations quickly and without errors. Also, the linkage between the courts to make the process of registration issues in the Execution process is fast. As express the issue in the Execution of the Tribunal can be withdrawn statements exporter resolution, regardless of the source of the case - within the jurisdiction or outside it - any data that all the case of doomed is doomed him and amounts are doomed to the expenses and fees, and other data from the proceedings have become available, and there is no need for re- entered and write as they were in the past. Further notifications notifications became operational, attend an email without the need to reviews redundant data, so that these data can be retrieved from the data to be issued by the communication or notification.

### **3. The Execution of criminal cases before the work of automation:**

Issues related to the Execution of the penal full linked to all the actors, which related to criminal cases, are linked to the Prosecutor and the court of first instance and appeal rapprochement, discrimination, and the Attorney General Registry and watching the Prosecutor, any that the file of the case must pass all these sections so that the execution typist service is competent, which made the process of Execution of the difficult and complex because of the multiple sections, which passes through the case. Add to this that any error or delay in one of these sections hinder the course of the case, in the event of an error was not easy to detect before the work of automation. The following is a picture of the work of the Chambers of the Execution of the penal automation before, according to the following:

#### **3.1. Communication of decision:**

The process of Communication of decision is a manual, which has created several problems, including: the lack of clarity of the line in some cases, the use of carbon copy, and a copy for reporting in each stage in the case, and more than what he was facing the executive staff during the operation is conducted on the issue. It was based on the date of notification and the date of the appeal, which will lead to failure to save judicial time limits for Execution, which, in turn, hinders the Execution procedures and causes problems subsequent audits.

#### **3.2. Organization of the Execution Procedures:**

The procedures for the Execution of some of the problems, the main of which is that relating to communications between the Prosecutor and the court, so that in each communication of a decision of the legal time limits must be sent hard copy to the service for the Execution of the Prosecutor to be recorded, after recording operational issue must be underline a note to bring each sentenced in the case, the matter that will take a lot of time, and in each note had to be brought to write manually any that if there were 100 cases, it must be reviews 100 subpoena.

#### **3.3. The time and speed of achievement:**

It is well known that the process of Execution is of particles that are slower than litigation, it is the need to check and scrutiny of the action by the writer on the issue, which creates an atmosphere of tension and pressure so that the employee needs to take sufficient time to take proper and appropriate action on the issue, in each stage of Execution was to be sure of the issue and its quantum data legal for each phase of Execution.

#### **3.4. Correspondence:**

Correspondence in the circle of the Execution of the Tribunal is an integral part of the Execution procedures within the courts, all the issue of the Execution of it was to send a note to notification of a decision handed down its judgment in each phase. It was initially sent to the Registry summary and then back again to the Registry notifications penal and if not for the communication of the party in the Registry Summary or not found on the entitled is the work of each communication revealed his resolution to be reported to the parties in the Official Gazette, after this stage can be the case that the RESUME is sent notification once again appeals to the registry so that it could not be implemented at this stage, there is not to prevent the Execution of the case or the emergence of any alert message alerting the writer that the issue could not be implemented because of the presence of resuming it. For example, if there is a resumption of the case file and the case is in the Court of Appeal, the memorandum of the communication of the verdict in the Execution, the writer implemented takes issue number in the circle of Execution to be imprisonment of defendant this legal error fatal.

#### **3.5. Problems of execution services:**

The main problems are the lack of a specific mechanism or any computer software can work, rather than the manual procedures that are a drain on time and effort and less. As well as the lack of standardized procedures for all services of the Execution in the courts, therefore, not the capacity to organize the itinerary of a unified, not only on the level of the Execution of the Tribunal, but also on the level of various courts.

#### **4. The Execution of the criminal cases after the work of automation:**

After the implementation of automation become easy to follow-up to the Execution issues and procedures, have all become the actions of notifications of the provisions of the Account and the legal time limits and printing notifications revealed to be published in The Official Gazette and correspondence between the Registry notifications service criminal actions of the Organization and clear Execution can be dealt with by any staff member, i.e. that it is not necessarily that have long experience in the Execution procedures, which makes dealing with particles of the system is easy, and can determine what has been developed and refined in the Execution procedures screens within the system, as follows:

##### **4.1. Communication of decision:**

The communication of the verdict to be, the writer only enter the number appears year case has full information reporting, the verdict and the names and addresses of the parties, not to mention that it will be very clear, in the event of any error in the text of the resolution can be exaggerating if information officer criminal notifications modified directly, if there is any action on the issue, the program officer warns that the issue could not be implemented.

##### **4.2. ORGANIZATION OF THE EXECUTION PROCEDURES:**

Execution procedures have become divided by stages of the proceedings in the court, i.e. that the system, the arranging these actions on the ground, the writer is only issued a memorandum for the communication of governance and sends it directly to the Registry competent Sr. without the need to books of

consciences, as was the case in the past, to follow up on what is happening on the issue of procedures and steps on the system in all smooth, easy, and will resume the case does not allow the system for the staff member Execution procedures and alerts the writer of resumption of not allowed to carry out the case, after the completion of the criminal proceedings in the Registry notifications the writer sent electronically to the Execution without the need to mail, which offers a lot of time and effort.

#### **4.3. Correspondence:**

The correspondence in the department of the Execution at the court after automation operations of more easy, each case will be the Execution of the resolution is to send a note for the communication of its judgment in every stage through the system electronically, and send an electronic copy to the Registrar of the summary of the Memorandum for the communication of the verdict, and then again send notifications to the Registry criminal if not for the communication of the party in the Registry Summary or not found on the entitled to be the work of a certain period notifications decisions provisions within this period push of a button, and not as they were in the past revealed mobilization for each case individually , to be notified of the parties in the Official Gazette, after this stage can be the case that the Resume notification is sent electronically to the Registry once again appeal so that it could not be implemented, that is, once the staff of the Registry express appeal log resume on the issue is to suspend the Execution of the case pending a decision on the appeal. This is done electronically, so that the process to prevent the Execution of the case, the employee on alert message that the issue could not be implemented due to resume.

#### **4.4. The problems facing the Execution:**

The main problems and challenges and the lack of staff is required to implement the system in a timely manner. The inability of the ministry to provide printers technical support maintenance of inks. The non-adoption of the system as a reference for reliable Execution between sections instead of books consciences. Requires the training of staff of users of the Mizan of the characteristics of the Program and the possibilities available for the program and how to extract the data staff is required to implement the system in a timely manner.

### **5. General Recommendations and problems in the Execution of civil and criminal law in the framework of the program of Mizan of:**

was the preparation of the program of Mizan-of-Al Resala (1) and (2) close coordination with relevant staff in the courts and the Ministry of Justice, including the workers in the Execution, which has led to the inclusion in the program, most of the tasks and characteristics necessary in general, has resulted in the application of the program Al Resala to a clear improvement in the performance of those working in the courts, including the Execution. Where procedures have become more speed work became easier retrieval of information and non-being lost through applications on the ground.

#### **1. The problems and challenges of the Execution:**

The results of a study on the study of a bridge the gap in the Execution of the judicial provisions Al-Abid liable in all of the Tribunals for the beginning of the west Amman, Zarqa. The draft of the rule of law carried out with the consent of the Council, and in partnership with the staff of the Tribunals the study examined the problems and challenges faced by users of the program in the implementation of the Mizan of the Tribunals. It should be noted that these problems and challenges are generally not only to the Tribunals, but all the courts in the Execution. The following is a summary of the problems in the Execution of the rights as expressed by users of the Al Mizan program of:



1. There is a gap in the ability of workers in the implementation of the Mizan of the use of the program, where some great ability and skill in the use of the Program and the characteristics provided by. In lacks others to estimate on the use of the program or to know all its characteristics. This disparity is due to the lack of a large number of staff of the implementation of the training necessary and sufficient to use the program and its characteristics.
2. The lack of statistical data analysts are able to extract the statistical data and information quality of the database of the Mizan-of-to meet the needs of decision makers in planning and agile LDP's and help all users of data at various levels on the functional level of the judiciary and the Ministry of Justice and beneficiaries and the relationship.
3. The fact that some of the rents using automated lists are prepared using the program (Excel) to facilitate the work inside the Chamber, but that these lists are used separately outside the program (Mizan), this is the problem is of the user program, not a problem, where the program of Mizan-of-includes all accounting matters required.
4. Some users of the program in the implementation of the existence of deficiencies and errors in the program, which do not allow them to complete all action electronically, forcing them to be completed manually. It was found that this problem is incorrect , as the imMizan is the result of the lack of knowledge of the facilities and the possibilities offered by the program execution services.
5. Still many of the old issues is not inserted in the system, in some of the Execution of the rights is not to start using automated system but with the beginning of the year 2012. Where the percentage of cases entered on the system does not exceed 1% of the number of cases so far of pending in the court. The problem is caused by the absence of a mechanism for follow-up and control required automation all issues first.
6. It was noted that the bulk of the complaints made by staff regarding the program back because they were unfamiliar with full program characteristics and capabilities and how to use them or to use them incorrectly. This is due main ly to the lack of training of users of the program, this is evidenced by the fact that the quality or others correct mistakes after they have occurred, and the quality of work steps that are unable to staff on their performance in some cases, despite that this is not in the heart of their work.

following table shows detailed list of shortcomings and deficiencies in the program from the point of view of users of the software, and mechanisms for the solution of problems, which have been compiled by the Ministry of Justice and in the Execution of the order of the corrected or completed.

The results of the poll showed that users of the program that the great majority of the problems faced by users during work are the problems resulting from the weakness of users know all the characteristics and advantages of the program and facilities provided to help them in their work.

**The most important problems in the use of the Mizan-of-IN THE EXECUTION OF THE POINT OF VIEW OF THE USERS programmers**

The problem from the point of view of users	Source of the problem		The essence of the problem from the point of view of the programmer	Mizan enhancement
	The program	User		
1- Upon review of the decision of the Governing Body can be		The problem	Training printers and access data on the use of the Program	

The problem from the point of view of users	Source of the problem		The essence of the problem from the point of view of the programmer	Mizan enhancement
	The program	User		
seen that the printer had erred in case number or the addresses are not clear or national figure is non-existent repair to the program by an employee notifications penal authority issued quality management in the Court, by the Ministry of Justice, which, in turn, granted the authority staff notifications Penal Section amendment to the program.		of the user	properly and introduce information and private parties to the case correctly and activating oversight and supervision of the printers.	
2- Lawyer's addresses in the non-detailed and clear mention of the name of the region only without the name of the street or reporting purposes Building No.		The problem of the user	When recording the proceedings or appeal or objection must be on the registration officer to make sure that the reviews full address and clear	
3- Cases in which a claim to the right to personal printer must be that the separation of track Criminal and Civil Penal Code and materials relating to the provision of the articles of the civil ian rule, which will facilitate the preparation of a compendium of penal provision in section penal signs		The problem of the user	There is a check box for the screen, the details of the claim to the right to personal	
4- The printer is enter the information on the program in the form in which it deems fit without legal materials, said the sentence any necessary information, which I needed in the summary of the sentence, so he was forced to print legal information and materials in accordance with the resolution in the file, which takes a longer time and delay the issuance of a compendium of penal provision any more time and effort that the procedure is twice the data twice once before the printer once		The problem of the user	The circular on the printers enter a compendium of governance fully with legal materials, and the duration of the penalty, as issued by the judge	

The problem from the point of view of users	Source of the problem		The essence of the problem from the point of view of the programmer	Mizan enhancement
	The program	User		
again by a penal notifications.				
5- The distinction between the person moral natural person upon payment of the resolution in the program in the sense when the two defendants the person moral natural person a printer or pen بدخل sometimes only one of them complained of that both sentenced and needs to be modified to send the file to the circle of quality, which delays the compendium of penal provision		The problem of the user	When payment of resolution and summaries of the provisions of the parties must mobilize all the cells of all parties, whatever the type of party and type of sentence	
6- There is no mechanism to know the number of notifications of the Penal Code, the Registry notifications electronically through the program or manually through the records.	The problem of the Program		There is no mechanism to know the number of notifications issued by criminal and it is possible to determine the number of notifications transmitted to the Registry summary	That could be through a screen for showing all notifications summary of the Penal Code, which was sent to summary
7- There is no mechanism to determine achievements of the chamber before the authorities responsible for the Section /the court (or in front of the supervisory bodies.	The problem of the Program		The lack of this in the program	
8- Cases to be the resumption of or objection does not appear on the program officer does not know that there is a criminal notifications only if requested by the case of the store and when he does not find the warehouse case officer in place to review the Register manual notifications officer should know that criminal case resumed, the objection procedure is not automated.		The problem of the user	If the resumption of the case or objection procedures were correctly by a follow-up on the system, the case shows that it resumed or opposable to it and proceeds to screen automatically for outstanding cases must therefore enter follow-up officer appeal or objection to the system to show when Officer criminal notifications	

The problem from the point of view of users	Source of the problem		The essence of the problem from the point of view of the programmer	Mizan enhancement
	The program	User		
9- There is no one on the program, what was the passing of specified duration in accordance with للتعاميم for reporting by summary and returned to the Registry notifications.		The problem of the user	There is no on-screen notifications all penal dates from the end of the action to be taken	as possible to be the work of a screen for showing the cases which have elapsed since this term
10- A error in the system automation ecosystem where does not know the Registrar Sr. criminal number of notifications received by the pen and the amount of them.		The problem of the user	You can search in the Registry SUMMARY BY TYPE OF seek retractions and identify the number	
11- In case there is a compendium of a penalty clause and a note for the communication of the same number of civil after the notification by the record by mistake the scanning the memorandum reporting proceedings special civil rather than on the compendium of governance.		The problem of the user	The circular on the summary precision in the penal abstracts impact in the course of the case.	
12- Sometimes the registry of appeal to accept the resumption, despite that there is a summary of the rule issued by destined to the Registry summary may be informing the appeal after legal term, but because the record did not return a summary of the reporting to the criminal notifications and did not reimbursed by the program, so the issue remain s outstanding on the program (under reporting) and thus the appeal is contrary to the law being made after legal term		The problem of the user	must be on the record that is as a result of notification in no later than 3 days of the issuance of the notification, and thus appear as a result of the reporting system and the Registry can appeal to determine whether or not to accept the appeal.	

The problem from the point of view of users	Source of the problem		The essence of the problem from the point of view of the programmer	Mizan enhancement
	The program	User		
13- Note are accommodated does not mention the fees and expenses are not calculated.		The problem of the user	The employee must be notifications mobilizing special fields for fees and expenses before the issuance of the note.	
14- Print warrants do not show the name of the Prosecutor and the writer.		The problem of the user	The name of the Prosecutor and the name of the note at the bottom of the memo editor	
15- When replacing the punishment or objection or appeal is not reimbursed by the Court on the program.		The problem of the user	The Officer-in-charge payment of any action on the issue of the system	
16- The check box to pay the Executive Board could not be any additions to it after conservation.		The problem of the user	There is a screen to edit information details of governance and implementation information from which the amendment to the Executive Board after it is saved.	
17- The operational issues that the reservation was then withdrawn, the box on how to implement the provision be not active and cannot be reimbursed by the issue.		The problem of the user	Payments can be the case after recorded through query screen to amend a lawsuit and not immediately the Screen case.	
18- Upon the withdrawal of the conclusions of the Court, the most abstracts face the problems and, therefore, we can not withdraw.		The problem of the user	Most existing problems caused by the lack of commitment of the procedures to be followed and also incorporated in the system and therefore problems arise when towing abstracts	
19- national figure when pulling the compendium does not appear if the entrance to erect higher in writing as early as the handwritten note.		The problem of the user	must not be allowed to register any issue, but the number of the party	

The problem from the point of view of users	Source of the problem		The essence of the problem from the point of view of the programmer	Mizan enhancement
	The program	User		
20- When executing query on the issues of Mizan-of-1 Sexually Transmitted to Mizan-of-2 through the base figure does not show the number of executive and found that it was not implemented.	The problem of the Program		Is not the work of the transfer of information for the Execution of the Court from the scale of 1 to Mizan of 2	That could be the agreement to introduce issues under Execution in west Amman court ( must not select
21- When the work of the Save and Exit executive issue a message appears that some nationalities entered parties to the proceedings (data conversion please enter correct multinational)		The problem of the user	You must enter a valid nationality of the parties before disconnecting the system and transferred to Execution	
22- The case of the dissolution of the decision of the Court of the Court and the Court of Appeal judgment, the new program is dealing with this situation, it is the dissolution of the note that it is not a new issue and demands		The problem of the user	(dissolution and the issuance of a new judgment ) are attracted such as how to operate the program in appeal	
23- Summaries of the provisions that have been reported to the registry for not finding the criminal notifications collected by the program and printing purposes outside of the Mizan of transmission to the Ministry of Justice gazette notification notifications officer criminal imaginary payment information in the screen for notification and publication in the Official Gazette No. Date of publication and the reason that the disclosure sent to the Ministry of Justice to be prepared outside the Mizan-of-as mentioned above.		The problem of the user	You must use the Mizan of this report because it shows the amendment can excel through the program and not through an external file	

The problem from the point of view of users	Source of the problem		The essence of the problem from the point of view of the programmer	Mizan enhancement
	The program	User		
24- Some users believed that there was no alert mechanism in the program for the end of the period of appeal or objection		The problem of the user	There is no on-screen notifications reporting penal provisions pending appeal period and the rest of the screens are all dates of the beginning and the end of the appeal	That could be the work of a screen for the issues which ended a period of appeal or objection

## 2. General Recommendations to develop and improve the work of the Execution within the framework of the Mizan Program:

Action is being taken to deal with the problems in the program of Mizan-of- (2) and addressed through the draft of the rule of law. These gaps have been identified in cooperation between the courts and the Ministry of Justice. In order to develop the Mizan of the need for work on the following:

1. The implementation of the capacity-building program for users of the program in the Execution to enable them to properly used and complete. It should also be a program of capacity-building for trainers to ensure that new staff in the Execution of the use of the Program in their appointment.
2. Work on the data and information in all the issues that are still not inserted on the Mizan-of-system as soon as possible. That, of course, calls for the allocation of full-time staff 2 to 4 people to carry out the data entry during a specific period .
3. The program provides an integrated financial system execution services (calculate the amounts and benefits, distribution of proceeds of the sale, issuing checks support ... etc). The system takes account of the different tasks and provide rules and standards and written accounting control and security and safety of staff. The problem is the lack of knowledge of financial potential users of the system provided by the system, and better use of them.
4. The necessity of unifying the action, including legal action in the Execution of all the courts to abide by all the Execution in the courts.
5. provide appropriate staff and create space and place all information technology staff to work on the issues and follow-up on the system in a timely manner and to provide all the necessary staff member of a computer, printer, scanner, ... etc. before working on the system.

### Third: The Role of the Mizan of the improvement in the efficiency and effectiveness of the judiciary:

1. **Qualitative and quantitative indicators to measure the efficiency and effectiveness of the judicial system:**

The program includes the Mizan of the amount of statistical indicators of the quality of information covering all aspects of judicial work, both at the level the courts at various levels, or on the level of judicial council and the Ministry of Justice. The program provided a fertile ground for breeding for many uses and applications in the Ministry of Justice and the judiciary have been programming litigation procedures and management communications programming Judicial Demarcation issues revenue collection and management and implementation issues investigative criminal cases and civil programming, management of the work of the Chambers documentation ... and other, this software is designed to work in harmony and integration so that together constitute one system.

The data base of the reality of the Mizan-of- (2) with many of the features, including: the possibility of adding new files, and add new data to the files in the al-Qaeda network, and retrieval of data files that make up the data base, and provide to the possibility of modernization and development, or delete unnecessary data files, and the needs of decision makers to assist them in planning, policy formulation, and help all users of data at various levels of the functional level of the judiciary and the Ministry of Justice and beneficiaries and the relationship. and allow the imposition of restrictions on insurance and confidentiality of certain data and the creation of new statistical indicators of the data on the files. The following is a summary of some of the possibilities offered by the Mizan of measuring the effectiveness and efficiency of the judiciary:

1. Check the case and serial number to it directly, with providing the possibility to facilitate the registration of the case transferred to the Public Prosecutor's Office during the withdrawal of their data electronically, which means that the need to re-enter the data which had been introduced to the Public Prosecutor's Office, as well as the case of the Express case Appellate Court data is pulled back from the outset.
2. Calculation of the required fees and preparation and printing of bonds arrested electronically linked with the case concerned.
3. To provide the possibility of a mechanism to control and follow-up to meet the duty on all issues specific value, and print issues that had not been met by any of those which did not fulfill its duties fully.
4. The distribution of issues to the gentlemen of the judges in the court electronically.
5. The preparation of the records of the meetings in the courtroom and before the secretary directly, with each of the judge and the parties to the case of the follow-up to what is recorded in the record first Powell to ensure transparency and accuracy printed record, by installing additional screens to use the judge and lawyers use litigants and others.
6. installing screens inquiry to serve the public in the entrances of the courts to enable citizens to search for their cases and to see the last action was, and the date of next meeting, in summary judgment in the case of issuing a judgment in the case, regardless of the place of registration issue (of the same court could follow all issues affecting them in all the courts).
7. To provide the possibility of preparation and issuance of all forms of communications and correspondence of the Court through your computer to drawing on data supplied to the computer



by a moment express the issue without the need to re-print data once again.

8. To provide the possibility for an exchange of notes between the various courts through your computer, without the need for paper-based communications, through the application of the so-called judicial communications management system.
9. Print the verdict on the case by the Secretary, which, in turn, also dismissed the case and the introduction of a compendium of provision of each of the Parties to the case and the charges of which he was convicted, and the introduction of the sentence (year, Month, Day), and the value of fines of the sentence.
10. To provide electronic services to citizens through the Internet through which they can ask for the follow-up to cases of home without the need to come to the Court through the case number.
11. Provision of electronic services for lawyers on the Internet can lawyer after entering a number of its membership in the Bar Association and password for the review of all issues relating to it, disposed of and perspective during a period of time determined by the can, as well as prints the agenda next week.
12. To provide electronic services to citizens through the mobile phone through which he could send an electronic message (SMS) requesting the inquiry of all cases brought against him in all courts, through the National Number or full name and date of birth. They are sending a message to him that there are no issues, or a list of numbers of cases and in any court. These messages can be to wage it.
13. The Court provides the possibility of the use of electronic messages (SMS) in serving as a means of judicial assistance. Where can be notified to the party or counsel of the date of next meeting the case number and the Court. It also can be communicated verdict is the answer can be summed up. These messages are free for citizens.
14. The system provides a automated electronic connectivity with the security of the relationship so as to be an exchange of all memos and correspondence through electronic messaging and without the need for paper-based communications, which take a long time and are subject to lost or damage or delay.
15. The system provides important reference to their Excellencies the judges and public prosecutors, where they can get the biography of judicial precedents include all the party, whether complaining or the offender moaned by a victim or a witness, etc. As well as access to the need and how the implementation of the provision, directly through the computer available in the courtroom or in the Office of the judge.
16. Automated system provides a large number of reports and statistics and schedules performance indicators for the period required by the user (current year, for example) and comparability with the previous period (previous year) which can know the extent of the progress and improvement in performance with the passage of time.

17. The system provides a automated technical means to measure the performance and achievements of individuals daily and monthly and annual and to compare it with their colleagues in the same Court who are doing similar work with average performance of staff, which, I mean, providing a means to motivate staff to do more work give-and-take, and reward and stimulate distinguished them.
18. The system provides the possibility of the establishment of automated judicial register, which offers a lot of benefits, including facilitating access to a certificate that are accommodated, to provide the Court with the information required in the case of repetition, facilitate the follow-up to the Execution of alternative penalties to impose appropriate punishment in breach of conditions of stay of execution, assist the prosecution through the provision of the criminal case, contribute to the establishment of a credit record natural and legal persons, the possibility of a link and the exchange of data with the security services of the relationship.

The following table a number of statistical indicators relational relational indicators qualitative information (reports) network and data network data base arranged by category benefiting from the data according to the type of index calculation mechanism athletes.

## **2. The characteristics and advantages of other work to improve the effectiveness of the judicial system and efficient human staff:**

was the preparation of an electronic directory contains all of the information and guidance needed by the user of the system contains a detailed catalog, easy-to-use with all the screens on the system so that any staff member, whatever its work can review this manual depending on the screen that works and see the instructions probation system which would facilitate the work of staff without complexity and any confusion in action.

It is available in the Mizan-of-screens are clear and easy-to-use, employee when the work on the program, the screens of work be clear during the labor and detailed disaggregated sequenced according to work and thereby strengthen the employee full knowledge about the work, in addition to the button there to help in each screen at the entrance to the screen that shows a clear and detailed on this work. In addition, there are other features, the main of which is as follows:

1. The Mizan of the expansion of knowledge to the users of the Program through the clarifications provided in the program screens in the search query, it also contributes to an increase in legal and procedural knowledge. It provides users and beneficiaries of knowledge by using the computer and its characteristics in general, especially for those who did not use the computer before, which develops skills have also such as summary. In addition, the user training at the beginning of the operation of the system in all the courts of all the screens in the system in general and training all staff needed by the district, in particular. The system is designed to make it easy for any staff member used without receiving any training.
2. The program will contribute to the promotion of professional capacity, as can the employee who works on the program of Mizan-of-to complete what is the largest of professional abilities, through the use of any screen of the screens and procedures used in the program, which strengthens the Mizan

of professional abilities, for example, the pen can work on follow-up writer screens and knowledge by building on its work on screens pen functionality, which offers the potential and labor in easy walking distance of the courts faster.

3. programs to meet the needs of users of audience, lawyers and judges, government institutions and others. All those users who need to use the program ends their work directly and they can dispense with the program in the area of their work.
4. Stimulate the program on the organization of the work of the staff, where there are in each court an integrated working team the functions required speed and accuracy of occasions. The program also reduces the overlap between the work of staff in different sections and regulates the employment of staff in the courts by giving each employee powers only to work without violating the terms of the reference of another staff member. This led to arrange the sequence of work between all sections and the staff .
5. The Mizan of the program is divided into five sections for crucial it ( the courts, public prosecution, Justice Clerk, tracking files, the notifies ) each program, to meet the needs of the users and specific needs according to work.
6. The system will cover day-to-day work of the screens provide major program in Mizan-of-use on a daily basis to cover day-to-day business of whether judges or printers or pens or the court ... and others. For example, there is a screen for the agenda work the court found the table daily or weekly certain court can work through sessions postponed or chapter or not, through responsible for this work. There are also monitors for the agenda of the judge to help him to know what he has of meetings during the period that they want. There is also the case and Agenda requests and other reports governing work daily, and printed to cover daily business.
7. Provide appropriate user cautions when errors occur, where the system has a alerts the user when the process of introducing any false statements or omissions user certain necessary box is unchecked, these messages show the user how to enter data accurately and fully without any lack of a clear, easy-to-show.
8. The program provides the possibility to correct the mistake by the user resulting from the operations of the information to the system so as to allow the user to input information and correcting errors and allowed the system through the powers given to specific group of users to modify any information is entered by mistake and correction, which strengthens the confidence accurately input information and credibility.
9. The program will help decision-makers in their decision-making, where the Mizan of the many reports summarizing the work of the courts during certain periods and achievements of these courts by showing issues contained round abstracts proceedings ... and other provisions and classifications, and helps the presidents of courts and the Ministry of Justice and the judiciary to take important decisions to facilitate and assist in the work of the Jordanian judiciary such as increase in the number of judges and when there is pressure in some of the courts, or to give training courses for judges, officers of the Court who are weak in a particular area ... etc.

**Models of statistical indicators , which govern the effectiveness and efficiency of the judicial system of the Mizan of the program (2)**

Area/goal	Indicators	Mechanism for calculating the index
<b>Evolution in the number of actual judges</b>	1. The development in numbers and percentages of judges, according to their work places, according to their qualifications and grades according to their sex, age.	Percentage change in the number of judges , according to their work places, according to their qualifications and grades according to sex, age, during the three years benevolent
	2. The development in numbers and percentages of Judges loaned and seconded personnel, envoys and retirees	
<b>Evolution in the number of courts staff</b>	The development of a staff attributed the courts according to job title and places of work, and their qualifications, experience, and sex and age	Percentage change in the number of staff according to their work places, and their qualifications and grades, sex, age, during the three years benevolent
<b>Annual and monthly rate burden of achievement for each judge and every judicial body</b>	1. Annual and monthly rate of real burden for each judge for each body, according to the Court	Number of cases contained round monthly and annually, according to the Court/number of judges
	2. Annual and monthly rate of achievement for each judge for each body, according to the Court	Number of cases disposed per month and annually, according to the Court/number of judges
	3. Average annual burden of judges by type of court	Number of cases contained round annually by type of court/number of judges
	4. Average annual rate of achievement by type of court judges	Number of cases annually disposed by type of court/number of judges
	5. annual achievement rate compared with the judge, according to the court issues contained	The proportion of cases detached) contained X 100
	6. annual achievement rate compared with the judge, according to the court issues contained round	The proportion of cases detached) contained round X 100
<b>Cases disposed by type and duration of registration</b>	Distribution of the number of issues attributed disposed according to age and type, according to the Court of the date of the registration of the total number of cases received.	Number of cases disposed by the court according to its kind age/number of cases received by the court, type, age X 100
	Distribution of the number of issues attributed disposed according to age and type, according to the Court of the date of the registration of the total number of cases received round.	Number of cases disposed by the court according to its kind age/number of issues contained round, according to the court, and Type X 100
<b>Security Institutions</b>	1. The development of a number of the issues by rating geographic region	The number of cases to the courts during the last three years, according to the classification geographic region
	2. The development of a number of the issues as reconstruction of the perpetrators of crimes and sex	The number of cases to the courts last three years according to reconstruction of the perpetrators of crimes and sex

Area/goal	Indicators	Mechanism for calculating the index
	3. Evolution of the proportion of cases implemented through judicial enforcement	The proportion of cases carried out through the judicial Execution of /total issues disposed for specific X 100
	4. The development of a number of the issues depending on the type of Party and the Court	A number of the issues depending on the type of Party and the Court during the last three years
	5. The number of cases received by nationality	Number of cases received by nationality and the Court during the last three years
<b>Civil society</b>	1. The development of a number of the issues relating to events by type of offense and the Court	A number of the issues relating to events by type of offense and the Court during the last three years
	2. A number of issues are accommodated disposed according to the length of service and the reform convicted sex and age	number of issues relating to events disposed according to the length of service and reform are accommodated convicted sex and age during the last three years
<b>Governmental institutions</b>	1. A number of issues relating to governmental institutions, according to the region and the defendant	number of issues relating to governmental institutions disposed according to the Court for the specific defendant
	2. A number of issues relating to governmental institutions according to the region and the defendant	number of issues relating to governmental institutions defendant disposed according to the region and the specific period
	3. The number of operational issues (others will appoint an executing) on the governmental institutions, according to the region and the amounts awarded	Number of operational issues (others will appoint an executing) of governmental institutions, according to the region and the amounts awarded during the last three years
<b>The Tribunals for Customs and Excise</b>	1. Number of cases according to the value of the case, type in the Tribunals	Number and type of cases according to the value of the case.
	2. The size of the paid fees on issues in the Tribunals	The value of the fees paid in the Tribunals
	3. The amount and proportion of the collections of the sentence of the total amounts required	The value of the collections of the sentence divided by the total of the amounts required X 100
<b>Court of the land and water</b>	The development of a number of the issues of the Court according to the geographical region	Percentage change in the issues contained in the year compared with Littoral squad, according to the region
<b>Lawyers</b>	1. The number of issues defendant guilty disposed according to the classification of the solicitor (for the purpose of assessing the performance of lawyers)	number of issues have been disposed in condemnation of the complainant, according to the classification of the case for the specific agent
	2. The number and proportion of cases contained available has agents from the total number of cases received	A number of the issues available with Dealer/total number of cases received

Area/goal	Indicators	Mechanism for calculating the index
	3. The proportion of cases which have Under-Secretary -total issues	A number of issues that have agent/ X 100 total cases during the last three years
<b>Follow-up book/judges</b>	1. A number of issues contained in a judge, according to the Court during the last three years	A number of the issues for each judge, according to the Court during the last three years
	2. The number of disposed issues to a judge, according to the court within a certain period of time	Number of cases disposed for each judge, according to the Court during the last three years
	3. The number of pending issues specific to the judge during a certain period	Number of cases pending for each judge, according to the Court during the last three years
	4. The number of disposed issues (the abstracts of provisions) during a certain period	Number of cases detached (the abstracts of provisions) for each judge, according to the court within a specified period of time
	5. The agenda of the judge within a certain period of time	A detailed report for each judge according to the Court
<b>The heads of the courts</b>	1. The agenda of the Court during a certain period, according to the court (contained, disposed, Pending)	A detailed report for each court of the agenda
	2. The proportion of achievement for each judge according to the Court	Number of cases disposed/number of issues contained round X 100 as judge
	3. The rate of the workload for each judge	A number of the issues round/number of judges by the Court
	4. Number of cases distributed on the judges during a certain period to achieve justice in distribution	Number of cases distributed to judges during the period specified by the judge and the Court
	5. The rate of change in the number of judges and the brackets within a certain period of time	A number of judges and the brackets according to the Court during the last three years
	6. The rate of assignments and distribution issues to judges in emergency cases, according to the Court	Number of references to issues emergency divided by the number of judges by the Court
	7. Report of proceedings movements during a certain period (amendments to the lawsuit-delete add an amendment ... )	To obtain data on the movements of proceedings during a specific period (Amendments and additions, deletions)
	8. Report user movements during a certain period (control of all movements of the user on the system)	To obtain data on the movements of the user during a specific period
	9. A detailed report of the users of the system include their names their powers and the courts that are working in.	Access to data on the users of the system, according to their names and the courts that are working in
	10. A detailed breakdown of the issues and judges during a certain period ( Pending earlier, Ward monthly, Pending earlier currently disconnected, issues of distributed and to bodies, Ward renovation,	Detailed data on the work of the courts, according to the Court

Area/goal	Indicators	Mechanism for calculating the index
	chapter, current recycling )	
	11. The development of a number of the issues of the Court according to the received during a certain period	A number of the issues of the Court, as contained in the previous three years
	12. Report of number of cases deleted meetings indicate why deleted.	Number of cases and meetings deleted by the Court and the reason for the deleted
	13. The agenda of the Court during the period of certain specific meetings ( )	Periodic report on the Court's agenda, according to the meetings during the period of the specific
	14. reasons for postponing the meetings, according to the court within a certain period of time	The classification of the reasons for the postponement of meetings, according to the court during a specific period
	15. A number of notifications that are still under notification did not assigned to summary record, according to the Court	The classification of types of notifications as attribution and the Court
	16. A number notifications assigned to summary record, according to their situation (had been reported, had not been notified )	The classification of types of notifications as reference and the Court
	17. The percentage of completion of notifications reporting section assigned to summary of total notifications during a certain period	A number notifications Section completed summary divided by the total notifications X 100
	18. A number of notifications Deleted Items and why deleted by the Court	A number of notifications deleted by types of deletion
	19. A number of notifications assigned to another court with show the status of notifications ) had been reported, have not been reported, assigned to another court )	A number of notifications assigned the court according to the case of notifications
	20. A number of notifications reported, according to a copy of an optical or non-existence of a copy	According to a number of notifications copies optical or absence of copies
	21. A number of notifications non-reporting by reason of non-reporting (not found, change of address, travel..)	A number of notifications non-reporting by reason for not reporting
	22. Number of cases according to its reconstruction by the month and year of the date of registration	Number of cases according to its reconstruction by the month and year of the date of registration
Decision makers	1. The distribution of cases according to the offense according to the Court geographic region	Number of cases, according to the offense and the Court geographic region
	2. Average age of issues for each type of court	The total reconstruction of issues per month and year divided by the number of cases by type of case and the Court
	3. The rate of the burden of the judge as issues contained a round	Number of cases contained round divided by the number of

Area/goal	Indicators	Mechanism for calculating the index
	according to the Court	judges/body, according to the Court
	4. The rate of completion of the Tribunal by type	Number of cases detached divided by the number of judges/body, according to the Court
	5. Average number of meetings in proceedings to each classification)type of proceedings) Classifications of proceedings	The total number of meetings divided by the number of cases, according to the classification of the case and the Court
	6. The proportion of cases for inbound by type of court	Number of cases detached divided by the number of cases received by the Court X 100
	7. Average age of pending issues to the courts	The total reconstruction of pending issues (Month and year) divided by the issues, according to the Court pending
	8. The rate of Omar cases disposed by type of case and the type of the Court	The total reconstruction of disposed issues (Month and year) divided by the issues, according to the Court pending
	9. The value of the tax implications of the agents (lawyers) on issues of proceedings it, according to the Court.	The total value of tax on lawyers, according to the Court
	10. The value of the fees paid to issues on the lawsuits filed by type of case	The total value of the fees paid for the cases filed by type of case and the Court
	11. Number of cases disposed by the presence of the accused (in absentia) and the Tribunal	Number of cases disposed by the presence of the accused and the Court
	12. Number of cases detainee moving according to their causes and type of the Court	Number of cases detainee moving according to their causes and type of the Court
	13. Number of cases disposed according to how to end (down temporarily, a chapter in the subject, ... )	Number of cases disposed according to how to end (down temporarily, a chapter in the subject, ... )
	14. The value of the fines and fees on issues disposed by type of court	The value of the fines and fees on issues disposed by type of court
	15. Number of meetings postponed because of non-attendance	Number of meetings postponed because of non-attendance



#### **The fourth ten: problems and challenges and recommendations to improve the effectiveness and efficiency of Mizan of:**

contributed to the program contributes to the Mizan of 2 in improving the functioning of the judiciary, as it provided the basic and strong exchange of data and information between the Chambers and the courts of order, on the one hand and foreign institutions of the relationship, on the other, in addition to that he has become the nerve center of the work of all the courts, therefore, the failure of this system leads to a malfunction in the work of the courts , and the delays and disruption of work, where the program is used in all pens courts ( halls of judges, clerks of the Court, the notary, the Summary, the attorney general, and applies to all courts of the kingdom of all kinds: discrimination, the courts of appeal, courts of first instance and rapprochement, the circle of the Prosecutor, courts Juvenile Court of land settlement, Major Crimes Court).

##### **1. General problems and challenges :**

The main problems faced by the program to improve the efficiency of the use of the Mizan of concentrated in the accuracy of the data entered by users. This is due to the following reasons:

A-Lack of training of staff, as is the recruitment of new staff in the courts and direct in their work without being trained on the system adequately.

B-Users mobility between pens the court which requires a re-training on the part of the system relating to the work of the user, and thus the error in the first stage of the work, and it is possible that the user is not received adequate training on the system.

c-Failure to inform users of the system in the courts by the amendments that you get on the system and the lack of action, and to you because of failure of quality staff or in the courts in circulated to them, where they are sent by Service Section Court systems through email for each of the President of the Court, quality staff, staff of computer for dissemination to users.

d-Lack of adequate awareness of before the heads of the courts and users, and judges of the importance of the program of Mizan-of- covering the following areas:

- Feed a database of the Mizan of each of the system of non-judicial register system are accommodated, therefore, work stopped on the programs of Mizan-of-lead to the failure of these systems.
- The adoption of the query screens lawyers in the courts on a database Mizan.
- The adoption of some ministries and institutions, which has been linked to , which will be linked to soon within the interface between government departments on a database of the Mizan of, in order to enable government ministries and departments to obtain information in relation to the proceedings, in order to follow-up and ease the burden on the courts as a result of the query.
- The link is currently with the circle of the Territories in order to enable the notary of access to accurate information when organizing agencies other documents, on the basis of information of the land, and vice versa, where the land will be based on the data of the Mizan of the documents of the Organization in order to know the notary, which belong to their transactions. The program was disrupted the Mizan of the previously mentioned operations.
- Some directorates of the Ministry based on the data base for the Mizan of important statistics and reports.

A-Do not be alert to users right action on the system, and is taking the appropriate action in the case was the mistake by users.

b-The lack of awareness of the importance of the role of the staff of quality assurance in the court, it is not to facilitate their work and cooperation with them to carry out their assigned functions of quality, especially with regard to controlling the quality of the input data to the Mizan of, in order to match what is on the automated system and the file copy of the issue, and, on the other hand not to inform staff of quality of the President of the Court in the performance of the work of the staff of the Mizan-of-through their observation of the system and processing reports, in order to that of the President of the Court or to take appropriate action.

c-The necessary amendments and additions to the system, which relates to the input operations, classifications and other proceedings.

d-The lack of statistical reports in the Mizan-of-especially in the system of the Prosecutor in order to follow up on the work of the courts and increase its effectiveness, in addition to the existing reports are not exported to Excel file for use by statisticians.

e-A decrease in the number of staff recruited my blog data to the Chamber, where some of the operations that require time to enter treatment, and scanned, the problem is compounded in the Execution of human rights, especially in the procedural orders.

f-The effectiveness of computers in the courts, where some of them suffer from slow cycle, which leads to an increase in the length of time to accomplish the tasks on the system.

## **2. Recommendations future needs:**

The main recommendations expressed by the specialists in the Directorate of information technology related to the need to work on the renewal of the Maintenance Contract with the company developed programs for Mizan-of-the-year, in order to make the adjustments and improvements to address the errors that appear in the system and adjust the program to keep pace with changes to laws and regulations, for example adjusting fees. Where the external funding covered the material cost maintenance contracts in the past years since the start of the work program of Mizan-of-till year 2012, in the current period , the Ministry of Justice to provide the budget for the development of the system of Mizan. It should be noted that the technical team responsible for the receipt of the program is still in the process of training and receive the program, and is in need of a period of time sufficient for receiving it, I am the fact that the system. In addition, there are a number of recommendations recommended by specialists in the directorate is as follows:

1. The need to add some important improvements to the program and fundamental Mizan-of-completion of total interest in the following areas:
  - Direct link with Civil Chamber, to ensure accuracy and speed in data entry the parties to the proceedings.
  - Direct link with commercial register of the Ministry of Industry and Trade, as well as to the Department for the control companies to obtain the data of institutions, enterprises, accurate and complete to facilitate and accelerate litigation procedures.

- Access to comprehensive reports and statistics to help owners the relationship to take Resolution (such as the judiciary, judicial inspection, technical office, heads of courts, ... ).
  - Automation Service cases to civil Attorney General within parts of the system as well as the Mizan of current public prosecution service administrative-Supreme Court of Justice.
  - Development of the system of civil Execution to include deposit box and rents.
  - Some improvements and modifications to the system (such as screens and management control and which will facilitate the process of modifying data in case the need, therefore, instead of the use of the company developed for the system to alleviate the financial burden of main taining the Mizan of).
2. Allocating an amount of money in each year within the Ministry's budget for the maintenance of the Mizan of, and maintenance of computer center alternative, which contains a database of the Mizan of.
  3. The involvement of technical team is responsible for the receipt of the Mizan of systems in the Ministry with the company team developed at the renewal of the system maintenance contract, in order to obtain the best interest in the process of receiving the development of the system.
  4. Activating the role of staff quality and awareness of the importance of the role of the President of the Court, judges, and in the follow-up to the application and use of the Mizan of 2 and quality of the input data.
  5. I follow-up of the Service Department before court systems of quality staff, and the President of the Court, in order to deliver some important information to users of the Mizan-of- duty circulated to users of Software examples (new amendments to the Mizan of, some of the instructions and evidence of Mizan, .... etc), together with an explanation of the amendments.
  6. Reduce the movement of internal travel in the court only in cases of extreme necessity.
  7. An increase in the number of staff in some pens the courts, with the need for the distribution of some of the courts between pens, to ensure equitable distribution of tasks between the staff of the courts.
  8. A specific mechanism to recruit human staff in sites and appropriate career qualifications and their skills:

The human element working in the area of information technology, whether on the level of the Ministry or the courts through the recruitment of qualified personnel commensurate with functional needs continuous training programs to raise their level and skills in the framework of different optimal exploitation of information technology and automation. This also requires improved living standards so as to be able to compete with their colleagues in the labor market in the private sector to reduce leakage of qualified personnel from the private sector to the Government. In this context could work on the following:

- The staff member in the right place, commensurate with eligible scientific experience and expertise, and to create new functional titles and appropriate links between the need of the Directorate of information systems appropriate scientific and academic qualifications to the restructuring of functional nomenclature to rearrange the organizational structure of the Directorate for the benefit of the Directorate and the officer and the real output dome portion would be better.

- Need to review periodically the job applied and adjusted in accordance with the developments and developments and updates in information technology. The audit included a study functions which action has been taken during the year, or which has not been working and what the reasons and to put an end to the duplication and overlapping of work.
  - Work to put an end to the lack of staff and to stop the Execution of the functions described in the sections of the Directorate of information technology and implemented by staff from outside the Directorate, because the risks resulting from the lack of clarity of the authorities and responsibilities in the event of errors in the work.
9. Training of staff within foundations and standards measured in accordance with the needs of the work:
- Training is organized within certain mechanism of the most important issues required for development work and improve awareness and culture among the staff, to become more aware of matters relating to work and improve their performance in relation to their work, it is also worth mentioning that the presence of a specific training recruits staff recruitment process easy distribution of staff within the Need desired. In this context could work on the following:
- Establishment of a training center inside the headquarters of Ministry of Justice offers all guests staff training new
  - Appointment of staff responsible for training new staff in all disciplines required.
  - monitoring the performance of staff before the Committee on the quality of the trainees in order to ensure that the mistakes
  - Develop User Guide on the Mizan-of-so as to be compatible with existing screens in the program.
10. Establishment of new reports multiple objectives serve decision makers:
- Much can be extracted from the statistical indicators of the databases of the Al Mizan program (see the table of indicators), which help decision makers Decisions (Judicial Council, judicial inspection, technical office, heads of courts, ... ) to select solutions suitable decisions to improve the work of the courts , or to see errors, which must be addressed to give correct results, it should be noted that these indicators can help to assess the performance of the work of the courts and to stand on the problems and solutions for them. The previous table a number of statistical indicators that could be provided by the Al Mizan program of which serve decision makers and many of the relevant authorities.
11. development of individual skills should be provided in a staff of the Court:
- There are many of the skills required by the staff of the court judges and heads of pens, writers, printers, which serve the users and help them to develop their performance within the scope of the work assigned to them, and make them able to development individually. The following are the main of these skills:
- Knowledge of using the Mizan of all staff, especially court judges through giving training individually.
  - The ability to deal with computer programs by all staff.
  - Give educational courses for staff recruits legal matters relating to their work.
  - Training of staff in the program of Mizan-of-so as to be able to extract information that will help them in decision-making.
12. consolidate and develop action to all the courts:

That the unification of the working procedures in all courts and circulate it to ensures transparency in the work and create a kind of organization so as to give the public the confidence in the court proceedings , which reflects the image of the good performance of these courts, and help decision makers decisions to take appropriate action without reference source. In this context could work on the following:

- The adoption of the electronic versions of the existing Mizan of the official program, so as to become accredited to everyone
- Consolidation of reports issued by the courts in terms of form and content, the rates based on the unification of the courts in a formal and binding.

13. Periodically check and follow-up on the accuracy of the data entered:

audit and control the accuracy of the entered data is of the most important issues that must be addressed, because it works to preserve the credibility of the input data to the program, which makes the results, which is extracted from the results of the valid and reliable, and can work in the system, but to provide a functional staff qualified to examine the entered data periodically and to make sure that all issues of automation first Powell and accumulation. In this context could work on the following:

- Establishment of a special section set the quality of component: statistical data (analyst), an employee quality (QA).
- Establishment of central administration in the Ministry of Justice is responsible for the audit and follow-up of data entered on the Mizan of daily and to implement the audit data on two parallel tracks: check email to ensure consistency of data and updated manual checking, sample from the files and matched with electronic files.
- Training of these sections on how to deal with errors and find appropriate solutions solving them.

14. The adoption of certain mechanism and uniform in all courts to serve beneficiaries:

The easy to provide service to the public, both quantitatively and qualitatively is clear evidence of the effectiveness and efficiency of the program of Mizan of, and enhances confidence of beneficiaries of the data and information that they receive from the program. So must be the adoption of the unified mechanism and sophisticated to serve beneficiaries (the public and lawyers). In this context could work on the following:

- Setting up a website is supported by the Ministry of Justice so that the data presented based on the terms of reference of the user.
- The adoption of the program in full, so that the procedures must be carried out before their application on the ground.
- The work of the guided in all departments and sections to give sufficient information to facilitate action on the beneficiary.
- The application of the system in all sections of the Tribunal, to ensure that the arrangement in litigation procedures.
- Raising awareness among lawyers in a detailed program of Mizan-of-and related procedures for the conduct of work.

15. Enter all of the issues of the Execution of the rights of old:

That the process of introducing a full and detailed operational issues on the program of Mizan-of-facilitates the process of the Execution of these issues, on the one hand the financial accounts, and also incorporated within the reports issued by the Execution, so as to be limited to the preparation of these issues is contained port, accurately. In this context could work on the following:

- The issues that have not yet been recorded on the Mizan-of-) before automation).

- Training for a number of my blog data-intensive, so as to ensure the accuracy of the input and speed in achievement.
- Provide appropriate staff to introduce these issues and include their needs in terms of the place and provide the required hardware.

## **CHAPTER FIVE**

### **Human Resources of the Directorate of Information Technology at the Ministry of Justice**

The focus of this chapter of the study is on human resources of the Directorate of Information Technology and the officials working in the Directorate of management information systems at the Ministry of Justice. We have already in the beginning of the study addressed the organizational structure of the Directorate and its hierarchy. In this chapter we will address the characteristics of employees in the Directorate of aspects of their specialties and qualifications, job titles, their tasks, job descriptions for staff, sections of the Directorate in terms of its objectives and roles. And will address the problems and challenges they face at work, as well as training programs that they had and their future training needs.

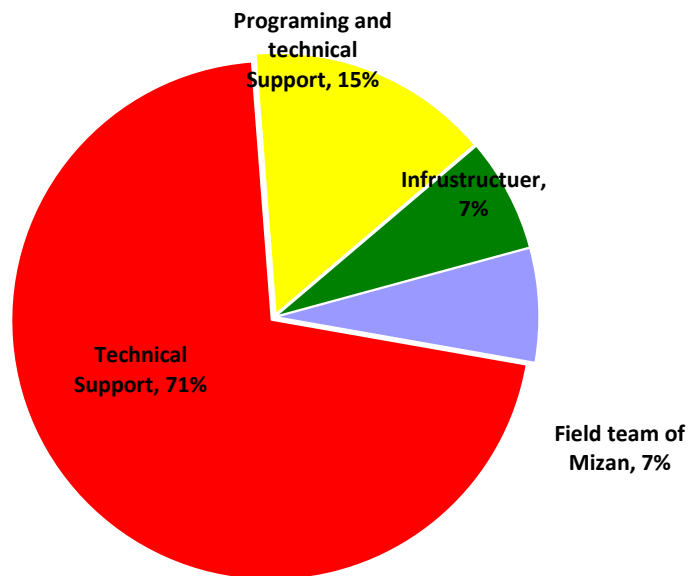
To achieve this objective, referred to the administrative structure and the documents adopted at the Ministry of Justice especially jobs description cards, functional tasks of staff and departments of the Directorate of Information Technology. For the same objective, a pilot survey was carried out to the staff of the Directorate of IT by using a standardized form was designed to achieve a number of goals, such as to identify the actual functional tasks that they perform to measure the gap between the official functions described in the job description card and the actual functions performed by the employee. And also identify the problems and challenges they face at work, their suggestions to solve the problems and overcome the obstacles and improve performance. And finally to identify training needs based on their perception and their desire for this need Assessment.

47 employees participated in the survey from different departments and specialties. The percentage of participants in the survey is 45.6% of the total staff of the Directorate which is 103 employees. This sample is considered representative for all the staff of the Directorate.

#### **First: Characteristics of the Directorate staff according to their specialties and work places:**

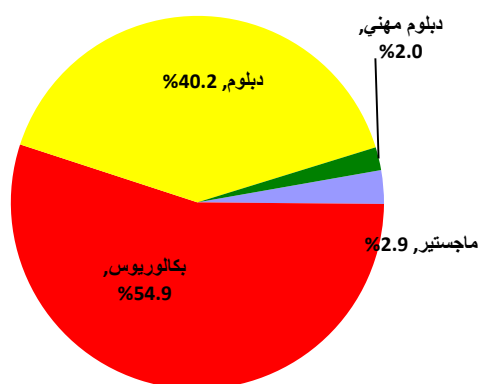
The number of staff of the Directorate of Information Technology 103 employees in addition to the Director of the Directorate, all of them are divided into four sections. The vast majority of the staff are technicians of technical support and their percentage is 71%, 15% are programming and technicians specialists, 7% specialists in the field of IT infrastructure, 7% of the field team are specilized in the maintenance and follow-up of Mizan program in the courts. Information Technology Directorate staff are distributed in the workplace: 30 employees working at the ministry and their percentage is 30%, 15 employees in the software development department and 7 employees in each of the infrastructure department and the Coordination and Technical Support Department. The rest of the staff are 73 employees distributed to the courts in different regions and their percentage is 70%.

Distribution of Information Technology staff baased on natuer of work 2013



For Staff educational background more than half and their percentage is 54.9% hold bachelor's degree, 40.2% of staff hold Diploma degree, 3% of staff hold masters degree and 2% of staff hold professional diploma. In all courts and Appeals Court of the beginning of the customs and income tax there are 34 staff from Directorate of IT of first instance following the staff of the Directorate of Information Technology.

Inforamtion Technology Directorate based on qualification



Notes from the distribution of staff at various locations as follows:

1. The vast majority of the 48 conciliation' courts Court don't have IT staff. They are available only in five courts: Magistrate Court of Na'our, Sahab, Shobak, Ain Al-Basha and Rusaifa. The shortage of IT staff is covered by the staff of near courts of first instance.
2. The current number of employees doesn't cover the needs of the Directorate and the courts, while some courts have one employee.
3. Since three years the government stopped the employment in the public sector that creates a challenge for Directorate because of the shortage in the number of employees.
2. Directorate is facing every year declining in staff numbers due to submit their resignations for the intensity of competition in the labor market and are provided attractive offers and opportunities outside the sector.

**Directorate of IT staff distribution according to work place 2013**

Department /Courts	#	Department/ Courts	# of staff
Magistrate of Sahab	1	Directorate Manager	1
Justice Palace- Karak	4	Infrastructure Department /	7
First Instance - Ajloun	2	Programs Development / Ministry	15
First Instance- Jarash	2	Coordination and Technical Support	7
Justice Palace - Irbed	9	Technical Support / Justice Palace	9
First Instance-Maan	3	Attorney General – Amman	1
First Instance -Tafleh	2	Court of Cassation	1
First Instance -Shobak	1	Court of First Instance and the	1
Justice Palace - Salt	4	Court of First Instance and the	1
Magistrate of Ain Basha	1	Court of First Instance - North	3
First Instance - Madab	2	Court of First Instance - South	5
First Instance - Zarqa	3	Court of First Instance - East	2
Magistrate of Russaifeh	1	Court of First Instance - West	3
First Instance-Aqaba	3	Court of Criminal	2
First Instance-Mafraq	1	Magistrate Na'our	1
<b>Total</b>	<b>103</b>		



## **Second: The objectives, Functions, and Job description of departments and staff of Directorate of IT:**

The organizational Structure of the Directorate of Information Technology (Management Information Systems) consist of four departments, each section is headed by a department head and follows him a number of employees from different specialties, and they are in charge of their work accordance with the objectives and tasks for each function within the administrative structure adopted, the job description card that approved officially which describes the tasks that should be performed clearly and the basic responsibilities of the job. Also those cards have the data that related to job titels, administrative unite, Heads and Subordinates, detailed tasks and duties of the job, the required qualifications that need to perform the job. It is essential that integrates job descriptions for heads of departments with the functions of specialists and technical personnel departments. Directorate Manager who manage the four departments, the departments are:

1. Infrastructure Department that consists group of technicians who work in computer networks, systems Information security.
2. Programs Development Department that follows by system analysits, data basis and programs speicilites, quality control.  
Coordination and Technical Support who follows by training and maintenance technicians.
3. Coursts System Department who follow to programs technicians.

## **1. Objectives, Tasks, and Job Description of Directorate IT manager**

### **1.1 Objectives and tasks of Directorate manager:**

The overall objective of the manager of the Directorate as defined by job function card is to propose policies governing the work and develop action plans and programs to achieve the stated goals and to provide a channel of communication and effective coordination between the Directorate and other administrative units in the organization and supervision of the Execution. Minimum educational qualification for Director of the Directorate bachelor's degree in the field of specialty computer and 12 years of experience in the field.

The Directorate should provide the services that related to the needs, requirements needed to create the infrastructure to accommodate the advanced information technology, internal networks and the Web at the level of the ministry and the courts. it responsible for The preparation of programs and information systems development and synthesis software required and updated to improve the quality of performance and achieve speed with accuracy in the achievement in a manner consistent with the specifications and requirements of the units of e-government in the Ministry of Justice, including the development of software and systems used for the automation of procedures and processes courts and departments and administrative units of the Judicial Council. . In addition to that, undertake the following tasks:

- Preparation of specifications for IT hardware of computers, printers and other necessary for the work units of the Judicial Council and the regular courts of various

levels and departments of the Ministry, providing and distribution those items in coordination with the concerned directorates.

- Run the computer, monitor and follow up the effectiveness of their work, building of daily and periodic maintenance and preventive program and follow-up maintenance contracts related to them, provide technical support and guidance in a way which ensures that sustain the operation and to prevent non-stop daily work.
- Apply an update and follow-up of the national e-government program regarding the work of the ministry, Make sure all requirements of the courts are met, and provide technical support to the staff of the ministry and the courts with regard to programs and services. Form a team work necessary to achieve this task in coordination with quality management department and human resources development department.
- Development of the ministry's web site, including proposing the required specifications of the web site.
- Provide the necessary software for periodic maintenance and antivirus software programs.
- Training of ministry and courts staff on the application and use of automated programs and different applications, training them on the mechanisms of archiving documents and correspondence electronically and on the application of automated business processes.
- • Communicate with Mizan programs users to discuss the problems and difficulties they face in within their usage and application, work to resolve, modified or added, discuss the development and modernization requirements according to business needs.

## **1.2 The Job discretion of Directorate Manager**

The Director of the Directorate of Information Technology should supervise on the work of the staff of the four departments that follow to the Directorate. The President is the Secretary General of the Ministry of Justice. The most important tasks of his duties overseeing the planning, organization, development work in the district, supervise the rehabilitation and training programs of staff, raids their efficiency and ensure of work flow of the Directorate. In addition to that, the Director highlighted the following tasks:

- To assist decision makers in the Ministry of Justice in the development goals for Directorate of Information Technology in the ministry, draw a strategic plans, policies and make the central decision that related or concern to the ministry in the field of information technology.
- supervising the implementation of plans, programs and policy assessments, and to ensure the safety and accuracy of implementation and compliance.

- Study the training needs of staff in the Directorate to develop their skills and careers.
- Development of information systems, encouraging on usage of information technology and develop the skills to use them.
- Preparation of periodic reports about the performance of employees, the achievements of departments, evaluation them in order to improve performance and workflow, evaluation of the knowledge gained accordance to specialty, and make sure that all the functions and duties of the different departments contribute to achieve the own goals and strategy.
- Any duties assigned to under the specialization.

## **2. The Objectives, Tasks and Job Description of Infrastructure Department**

### **2.1 The General Objectives and Functional Tasks of the Department:**

This Department consists of five employees from different specialties, they are: Network specialist networks, systems specialist, and security and protection of information systems technician specialist, a systems technician. The minimum educational background of the first three specialties is BS in Computer Engineering and five years experience as a minimum. For Security & protection of information systems technician and System Technician they should hold diploma in the computer as a minimum and more than three years practical experience in the field.

Infrastructure department goals are supervising on the implementation of the necessary tasks to sustain and develop networks to ensure their effectiveness and meet the needs of infrastructure and electronic applications in the ministry and the courts, supervision on the application of a security system for the information network within the ministry and ensure effectiveness and main tain the confidentiality of information and critical stored data. The functions of this department is identifying the technical requirements of networks, devices required for the ministry and the various courts ,and recommend for providing direct and design the network infrastructure for the direct head. identifying the specifications of IT hardware and maintenance of network devices, monitor network performance information in terms of safety, speed the performance of software used and develop the appropriate solutions to improve their performance. In addition, the Section other following tasks:

- Identifying the technical specifications of disposables such as inks, paper, computer wire mesh and others to be provided in coordination with the Departments concerned.
- Receive requisitions of own devices, equipment, disposable and review them to determine the appropriate quantities and be responsible for sending them to requesting party as soon as possible.
- Evaluation of current networks in ministry and courts and ensure of its continues efficiency development.
- Do the maintenance for networks in addition to the prevention maintenance on regulate basis and keep on the high readiness of network.
- Provide all staff with excommunication by using E-mail and train them on it's and network usage with efficiency.
- Create accounts and email for new staff on intranet of the ministry and following accounts cancelation for resigned staff.
- Apply security system for information network in ministry and courts; ensure is efficiency that keep it safe from hackers, on the confidentiality of information and on recorded data. In addition to main taining the integrity of the information network in the ministry of viruses, damage or repair various, supervise on the treatment and follow-up updated.

- Coordination with Administrative Affairs Directorate to manage the purchasing process and provision different types of equipments in addition to the required material to network based on the policies and procedures.
- Participation in national e-government program development effectively in coordination with programming development department, Administrative affairs directorate and with who it may concern in information technology ministry.
- Following up with maintenance contracts implementation technically with respect to the main equipments, network, and operation system in coordination with logistics department. Following up purchasing and renewal of software license which is used in Labor Ministry.

## **2.1 Job description for Infrastructure Staff:**

Job description card of infrastructure staff who following IT Directorate and which issued by Justice ministry includes detailed information about the job titles that follow this department in terms of employment number, the goal of position, duties and responsibilities of employee, internal and external relations, and the qualifications of staff such as educational background, experience. The following job tasks for each employee, as contained in document:

### **2.1.1 Job Description for head of infrastructure:**

The educational background for the head of department as minimum is: BS. Computer engineering or Network Engineering or Programming Engineering and Information systems or Computer or any related topics. He should have minimum 7 years in relative field. He has administrative, supervision, planning, organizing, following up, and coordination skills. In addition to the ability of computer usage and its application at the field of training, direction, report writing and technical specification. He is responsible for direct supervision on five specialties: Network Specialties, System specialist, Information security specialties and technician in networks and systems. Head of Infrastructure supervises on implementation of required tasks to sustain and develop operating networks for ensure its efficiency and its capability to meet the needs of infrastructure and e-applications in ministry and courts. Also supervisor in safety system application on information network inside of ministry and ensure of its efficiency and keep on the confidentiality of saved information and data. The following matrix shows the tasks of departments head and his staff.

One of the most important tasks that shown in following matrix is supervision on indentifying the technical needs of information networks, its equipments and accessories, computers staff and ready software in ministry and courts. Supervision on preparation the technical specifications of networks and its security systems, its equipments ,its server ,operation systems, the software required to operate and sustain the operation of information systems of the ministry and courts, in coordination with the concerned parties internally and externally ... And others.

### **2.1.2 Job Description of Networks Specialists:**

This position classified as technical position under direction of infrastructure department manager. The goals of this position are design of internal and external networks, supervision on its implementation and planning for its development and sustain. The minimum qualification for this position is BS in computer engineering or networks engineering and

minimum of five years in design and management information networks. He should have background about networks systems, operating based on the specification of its equipments and software of support and maintenance.

The most important tasks which performed by network specialty based on the job description cards are design the technical specification that related to information networks and do what it should be done for network implementation and development it to ensure its efficiency and meet the infrastructure and e-application in ministry and courts.

The study showed the actual tasks of network specialties and they are as follow:

- Extension and installation of new computer systems in the new court buildings or tenant.
  - Maintenance of networks points deactivated while internal malfunction.
  - Identifying the needs of preventive maintenance and emergency for information networks  
And equipment of the links, adapters, shelving cables, and other accessories networks, equipment and computers of the server room that needed to main tain the validity of those devices, equipment and submitted to the department head.
  - Inspect and examine information networks and its equipment of connectors, adapters and shelving, cables and other accessories for local and civil ian networks deployed to meet the needs of the performance of the infrastructure and electronic applications in the ministry and the various courts. Identify problems and technical malfunctions and ways to solve them, documentation the procedure and its results within internal networks check application depending on main taining the effectiveness of the internal network of the Ministry and the courts.
- 
- Conduct numbering procedures for extensions and used connections for the network and its devices. Documentation schemes extensions of local networks in the ministry and the various courts, constantly updating to correspond with the situation on the ground.
  - Implementation of extensions to networks Informatics, its connections, installing their own devices and the realization that is implemented internally.
  - Follow-up of main maintenance of the network, its equipment ,its accessories that implemented by third parties to ensure the safety of the technical implementation and application of the rules and regulations of public safety, and raising his remarks and suggestions to the head of the department.
  - Participation in receiving and examining of the work that carried out in the ministry networks and implemented through suppliers to make sure they conform to the required specifications.
  - Keep the documents, records, files that related to this job, doing any task that delegated to him by his direct manager.
  - Programming new systems, maintenance and amendments the current systems based on the required needs.

### **2.2.3 Job Description of Systems Specialists:**

This position classified as technical position under supervision of infrastructure department manager, the position goal is identifying the technical specification of operating systems, software, security software and supervision on its installation, operating, sustaining and

developing. The minimum educational background is BS in computer engineering, Programming engineering. He has minimum five years in operating and software's system management. He should has the sufficient information about operating and software system, network system management, the following matrix show the similarity of head of department tasks with systems specialist tasks.

The most important tasks that should be performed by systems specialist are data collection, and analysis, preparing the drafts of studies that they need them to identify the need of computers and their accessories (Computers, printers, scanners etc.), identifying the ready software that including the required for periodic maintenance for computers and virus protection in ministry and courts, make recommendations about them to the direct supervisor and tasks implementation.

#### **2.2.4 Job description for Information security and protection**

This position classified as technical position, the direct supervisor is Information technology directorate manager. The goal of the position is the responsibility of Security and protection of the automation enterprise information systems. The minimum educational background for this position is BS in engineering or information technology or information system management or communication; he has minimum five years in information technology field. He has knowledge about the products, tools, security systems, internet for example (Firewalls), risk assessment, international security standards for example ISO27001 or any information security standards. The following matrix shows the similarity the tasks of head of department with information security specialist.

The most important task of information security specialist are information technology policies and strategies sustainment and management, reviewing all designs of systems and simulation them for e-government in information security field. In addition to planning of projects implementation and etc...

#### **2.2.5 Job Description for networks technical**

This position classified as technical position and the direct supervisor is head of infrastructure department. The goal of the position is cooperation in design of local and internal network, supervision on the network implementation and planning for its development and sustainability.

The minimum educational background is diploma in computer engineering or network engineering or computer science or any relative filed. He has minimum three years experience in network maintenance. He has knowledge in regulation, instructions, and approved procedures that related to his work that include sustainability procedures of internal networks efficiency to ministry and courts and processing the computers. He should have the knowledge of network operation, maintenance procedures and safety guidelines. The following matrix shows the similarity the tasks of head of department with networks technical.

The most important task that performed by network technical based on the job description card are Implementation of computers networks extensions, connection and installation the own hardware, all the duties that should be implemented internally, required numbering of used extensions and connections of network and computers the related to it, documentation the plans of local extensions of ministry and different courts and continues development to fit the current situation.

Network technical work does not differ from network specialist work except in terms of supervision of networks specialist.

The actual tasks of network technical are:

- Sustain the work of the internal network, work devices and printers.
- Outfit the offices equipment to work within the court in terms of network and services.
- Maintain the work of servers and the internal network.
- Justice program installation on personal computers and mobile
- Training of staff of the Court on the application software
- Supervising on the main computer center.
- Programming and protection devices settings (Firewall) and major switches.
- Follow-up errors in networks, operating systems and fix it.
- Maintenance of all devices, computers, portable devices of judges, the printers and scanning in ministry.
- Programming and maintenance of Windows operating systems and justice program on computers and portable devices of judges.
- Follow-up maintenance malfunctions with maintenance companies.

### **2.2.6 Job Description of Systems Technical**

This position classified as technical position, he is reporting to infrastructure department. The goal of this position is participation in identifying the technical specification for operating systems, software, security software and participation in installation, operation and development. The minimum education background should be diploma in computer engineering or any specialist related; he has minimum five years in system operation and software. He has the knowledge in the regulations, instructions and procedures that related to his work that include processing the computers for staff usage. In addition to the knowledge in operating software, programs, and information system management and network system.

The most important tasks that performed by systems technical are: following the process of providing with computers for the staff of ministry and courts by contacting the approved suppliers and participation in committees to check that computers meet the required technical specification.

## **3. the goals, tasks and job description of Software development department staff:**

### **3.1 The goals and tasks of Software Development Department:**

This department includes four staff specialized in **system** analysts, programmer, database specialist, and software library technical. The minimum educational background is BS. In computer science and five years at this field.

The general goal of department is identifying the needs the ministry and courts for information systems and software, supervision on its preparation and implementation, following maintenance procedures, providing consulting and technical support for all systems, ensure that programs fit with specification and readiness for application, training the

users on the programs, applications and different data base, supervision on database management in ministry and courts.

The most important tasks at his department are identifying the structure of software that they need them based on the details, information and the usage methods, the goals of its availability, design and analysis the required items and fields at these programs and test the operation validity and the achieve the required goals. In addition to the following tasks:

- Identify human resources needed to run the systems and work to be provided in coordination with the Human Resources Directorate.
- Identify technical specifications of the programs and databases to be built to the ministry and courts in coordination with the e-government unit and cooperation with the Procurement Committee for procurement management and technical evaluation.
- Preparation of studies and gather information in order to identify business processes inputs and outputs of the various processes that used in the directorates and units, identify problems in coordination with the unit policies and institutional development in order to translate those actions into automated programs and reports automatically.
- Analyze information and prepare programs designs and automated reports automatically to develop systems compatible with the working procedures of the various directorates.
- Work on the quality control systems that used in the ministry and courts, and ensure of achievement of the desired goals and the need to be adjusted or updated in coordination with the departments and administrative units concerned and submit periodic reports.
- Documented procedures for work programs, reports and specifications and criteria to be followed during the development of programs and the development of the necessary instructions to do so.
- Preparation of actions plan, determine the cost of automation development of the systems and software in the ministry and the courts, the period of time necessary to do so in coordination with the departments and technical support networks .
- Identify regulatory procedures, the design of automated control systems for systems in the ministry and the courts and to make sure their application and effectiveness.
- The technical administration of the web site in the ministry, maintenance and technical support to its users, in coordination with the Directorate of Communication.
- Save for systems design guides and manuals for use; sustain its adjustment based on additions and amendments made based on regulations. Save the file systems and software and main tain based on the updates.
- Preparation the various software applications manual to be used by information systems users. Determine the powers of each user for various programs.
- Follow-up software maintenance contracts in coordination with the Department of Supplies.



- Database management and periodic inspection work to ensure their effectiveness and perform maintenance and expansion necessary.
- Take backups for systems and database and ensure safe keeping with documentation of these copies.

#### **4. Job Description of software development department:**

##### **4.1 Job Description of Software development department manager:**

This position classified as technical position, the staff of this department are, system analyst, programmer, database specialist, web designers and software library secretary.

The general objectives of this position are identifying the ministry and courts needs of information systems, automated programs, supervision on its preparation and implementations, following up the maintenance, providing with consulting and technical support for all systems and ensure that matching programs to the specification and readiness for application, training the users of information systems on the application, programs and different database, supervision on management, sustainability the efficiency of different database in the ministry and courts. The minimum educational background is BS in computer science or information systems or programming or any specialization related to it, he has 4 years experience in public sector or courts in similar fields and he has experience in field of information system design, quality control and database management.

The most important tasks for software development department manager are identifying the needs of ministry and courts of information systems, software, programs development and system software in information technology directorate, supervision on data collection, documents about desired systems that need updating or adjusting, study, analysis the systems and design the items and the main fields for systems and special programs in a way that match system analysis results, in addition to identifying the specification that need it to implement those programs, systems and database.

##### **4.1.1 Job Description of System analyst:**

This position classified as technical position, the direct supervisor is head of software development department. The general goal is data collection, analysis, draft studies preparation to identify the technical needs of ministry and courts of information systems and software, design the systems that we need to automate them, design the systems fields with its software that found them in a way match the results of system analysis and participation in testing and delivering the implemented systems (internally and externally).

The minimum educational background is BS. Computer science or any specialization related to it. He has minimum five years in systems analysis field. He has knowledge in approved regulations, instructions and procedures that related to his work that includes programs and system preparation and development in directorate, the full knowledge in systems analysis tools that in include (Case Tools) and System flow charts and main stream programming languages. The following matrix shows the matching the tasks of head of software development department with system analysis specialist.

The most important tasks on system analyst are identifying the structure and language the software that required automation of them to satisfy the needs of users through studying the project that we need to automate its requirements and the way of using its items.

Development of data entry, saving and processing and transfer them the system that need to automate, in addition to preparation of the system interfaces and schema relationships and linkages within and between different systems. Classification of data entry programs, reporting, view, updating, and management for the systems that need to automate in accordance with the user needs and requirements.

#### **4.1.2 Job description of programmer:**

This position is classified as a technical function; the direct supervisor is the head of software development. The overall objective of the job : the preparation and development of software , through the development of work programs, procedures designed screens, reports necessary to meet the user's needs ,work to amend and update the operating software ( existing) , document workflow software maps and reports. Minimum educational qualifications for the position is BS in computer science or programming or in any discipline irrelevant. Has a minimum experience of five years in the field of programming and databases. who is available should has full knowledge of approved regulations procedures for his work that including conducting the preparation and development of automated software and systems in the directorate , quality control of used software and systems. He should has knowledge in programming languages (Oracle, PI/SQ), software that related to database for example (Toad) and other software. The following matrix shows the approach the task of position head with programmer tasks.

The most important tasks carried out by the programmer according to the job description card are to prepare and develop data entry programs, reporting, viewing, modernization and summarizing of systems and databases to be developed through the development of the working procedures of the programs, designing screens, reports that necessary to meet the needs of the user according to technical specifications that identified by system analyst, documentation the workflow software maps, reports, and troubleshooting steps system work, and procedures of modification and updating of software and monitors. The following is the actual job tasks performed by the programmer:

- Create accounts and e-mail.
- Identifying specification and tasks of protection device (ISA Internet Security Accelerator)), and conduct periodic monitor that is necessary for the usage of the Internet.
- Web Portal officer
- Apply the approved terms of national policies for the security and protection of information by the secure government for electronic accounts, computers and e-mail.
- A content link officer of the e - government portal and participation in technical support committees for computer hardware tenders and related accessories.
- Examination, analysis and programming of new and revised systems, main tain and update existing systems.
- Training on the management of Mizan data base
- Preparation of statistical reports by using Mizan program.
- Relay cellular bills of Zain and Orange companies periodically to the payroll system.

#### **4.1.3 Job Description on Database Specialist:**

This position is classified as technical function; the direct supervisor is the head of software development department. The overall objective of the job: Database Management, main tain effective operation. Minimum educational qualifications for this position is BS in computer science , programming , or in any discipline irrelevant , has a minimum experience of five years in the field of database management, is available has full knowledge of approved regulations and procedures that related to his work and full knowledge of using software to monitor the performance of databases such as (EXP, RMAN), full knowledge of programming language databases such as Oracle, Develop, Toad or any other languages . The following matrix shows similarity of department manager tasks with tasks of database specialist.

The most important tasks carried out by a specialist database is to manage and main tain the effectiveness of the various databases in the ministry and the courts in a manner consistent with the requirements of the working environment through the operation, closure and control of various operating and activating systems, activating linking system between major

databases in the ministry and external linking points, Monitor the entered data on the databases that is his responsibility to make sure they do not contain any damage or virus before the transfer, storage and distribution on the storage media and various conservation.

The following are the actual tasks for database specialist:

- Programming and systems analysis.
- Follow-up, application and development of systems.
- Reporting and conducting studies on the systems.
- Main tain the equipments, the internal network and printers in court.
- Sustain Adaleh program on office computers and mobile devices of the judges.
- Sustain the work of the court staff on Applied Systems.

#### **4.1.4 Job Description of Software library Technical:**

This position is classified as a technical function; the direct supervisor is the head of software development department. The overall objective of the job: to provide backups of data and systems in the ministry and courts to make it easy to referee to them when needed and renew software licenses and databases. Minimum educational qualifications for This position is a diploma in computer science , programming , or in any discipline irrelevant , and has a minimum experience of five years in a similar field .He should has knowledge about the approved regulation, instructions and procedures that related to his work, database management and using control programs of database for example (EXP,RMAN). The following matrix shows the similarity of tasks of department manager with tasks of software library technician.

The most important tasks of this position are copying on daily basis the data and systems of ministry and to ensure that successfully done. Copying data archiving system that applied in the ministry and keep the last copy of every month, keep the backup at safe place and make the reviewing easier and upon request and preparing the technical reports

### **5. The goals, tasks, and job description of coordination and technical staff**

#### **5.1 Goals and Tasks of coordination and technical staff:**

At this department there are three specialists: head of technical support/ Court of First Instance, Technical Support/coordination and training and Technical/ technical support. The educational qualification sis minimum BS. In computer science. He has two years at this field. The second positions are diploma in computer science and minimum two years at this field.

The overall objective of the department is to develop systems and mechanisms to provide technical support services to users of computer hardware, related accessories, automated systems for the courts, follow-up process of technical support, and maintenance of computer hardware and supervise technical support technicians and rehabilitation. The main tasks of the department to provide immediate support for all users of devices within the ministry and the courts to main tain the efficient functioning of the hardware and software. Preparing periodic plans for the maintenance of the hardware and automated systems used. In addition the department will perform the following tasks:

- Follow-up processing , installation and operation of new equipment related to the computer, the network, make sure the process of transferring information from old computers to the new one, replacement and removal of all of the information from old devices Replaced After you save copies of duly .
- Examination of old hardware replacement and determine suitability for use later or to dispose of them according to the procedure in the ministry.
- To main tain the integrity of the computers in the ministry and the courts of viruses, damage or repair of various supervision processed.
- Transfer of any new requirements for users to the relevant departments in the Directorate of Information Technology.
- Training new users on the optimal use of the systems, software, and track the status of implementation, make recommendations on improving and accelerating performance.
- Keep up with consumers and continue to set up orders in a timely manner and follow-up obtained.

## **6. Job Description of Coordination and Technical Support Department**

### **6.1 Job Description of Head of Coordination and Technical Support**

Position of head of technical support and coordination classified as technical position. Officials toward the head of the department are: Chief, Division of Technical Support / Court of First Instance, Technical Support Technician / coordination and training. The overall objective of the job : the development of systems and mechanisms to provide technical support services to users of computer hardware and related accessories and automated systems for the courts, follow-up process of technical support and maintenance of computer hardware and supervise technical support technicians and rehabilitation. Minimum qualifications scientific vacancy This function is BS in Computer Science or any discipline irrelevant , and has a minimum of seven years in any related field , he has full knowledge of approved regulations, procedures and related work in which to perform maintenance of computers and accessories, a software maintenance periodic and preventative , preventive maintenance of the hardware. Knowledge is also using the software maintenance and protection of the computers used by employees, and networking systems. The following matrix shows the similarity of tasks of head of the department with the staff of the department.

The most important tasks carried out by the head of the department are following up the preparation, procedures and mechanisms to provide technical support services for users of devices of computers and related accessories and automated systems for the courts, dissemination of technical support and technical support technicians technical field in the courts and train them, follow up on their commitment to it. contribute to the preparation and organization of periodic preventive maintenance plans for information technology equipment and automated systems used in the courts and supervise their implementation , according to the methodology and the specific mechanisms to conduct preventive maintenance of equipment in coordination with the Chief of the Division of regulations and systems analyst ... And others.

#### **6.1.1 Job Description of Technical Support/coordination and Training**

This function is classified as a technical function directly responsible is the head of coordination and technical support. The overall objective of the job: Receive maintenance requests received by the department and classified according to their priorities and convert it to a professional technical support field specialist and coordination with specialists in departments of infrastructure and software to solve problems that could not be resolved by the support technicians technical support, monitor the implementation of maintenance requests and updated. Minimum qualifications for is Diploma in Computer Science or a related topic, and has a minimum of two years experience in a similar field. Who is available has full knowledge of the instructions and procedures adopted for its work, including maintenance of computer hardware, accessories, software maintenance and preventive patrol. Knowledge computers specification used by employees, related accessories and maintenance methods. The following matrix shows the similarity of head of department tasks with Technical Support Officer / coordination and training tasks. The main tasks carried out by the technical coordination and training is to review the request of technical support various records documented, provide suggestions developmental for them, providing the units and directorates in the ministry and stakeholders with maintenance of hardware and software forms and records, follow up on their commitment by using them, receive technical support requests that provided by the technicians support of different courts , checking them to make sure they contain all of the data and required signatures, record the requests for technical support, arranged according to their priorities, convert it to a technical support field who concerned, and in accordance with the adopted procedure.

#### **6.1.2 Head of Technical Support / Court of First Instance**

This position is classified as a technical function directly responsible is the head of coordination and technical support. The overall objective of the job: overseeing the court to inspect the servers, check the internal network and infrastructure, oversee the implementation of the new regulations in the courts and follow the progress of their workflow, follow-up training and technical support technician's field. Minimum qualifications of this position is BS in Computer Science or a related field has a minimum experience of five years in a similar field. who is available has full knowledge of approved regulations, procedures and related work in which to perform maintenance of computers, accessories, periodic software maintenance, preventive maintenance of the hardware, Coordination and training, knowledge of software application and operating systems , maintenance, protection of computers and networks. The following matrix shows the similarity of head of department tasks with Chief, Division of Technical Support / Court of First Instance.

The main tasks carried out by the Head of Technical Support Division / Court of First Instance is the do inspected servers and try to resolve their problems. To inspect the development of the internal network and the infrastructure of the court, try to solve their problems, the application of new regulations in the courts and training of technical support staff

#### **6.1.3 Job Description of Technical Support**

This position is classified as a technical function directly responsible is the head of coordination and technical support. The overall objective of the job: implementation of the preventive and curative maintenance of the computers that used in the courts in accordance

with the methodology and the specific mechanisms to conduct maintenance of computer hardware and accessories. Processing, installation and operation of new equipment related to the computer and the network. Minimum Diploma in Computer Engineering, Network Engineering or Computer Science or programming and systems analysis, has a minimum of two years experience in a similar field. Available has full knowledge of the procedures and instructions adopted for its work, including the (maintenance of computers and accessories, software maintenance and periodic preventive), knowledge in software applications and operating systems, maintenance, protection of computers and networks. The following matrix shows similarity the tasks of head of department with Technical Support technician tasks. The most important tasks carried out by the technician / technical support is the implementation of emergency maintenance for computers used by employees and their accessories (computers printers, scanners, etc ...) in the courts in accordance with the methodology and the specific mechanisms to conduct maintenance of computer hardware and accessories. Processing, installation and operation of new equipment related to the computer and the network, and make sure the process of transferring information from old computers to the new one, and delete all information from the old hardware to replace after save copies of them duly.

The actual tasks performed by technical support technicians at the level of the courts much more than those functions described them in the official job description card. In charge of all technical tasks related to information technology in the courts of maintenance equipment and printers, programming and database management and issues related to networking, training and installation and other programs. The following are the most important tasks performed by actual technical support staff:

- Provide technical support services to court
- Maintenance of computers, printers, accessories, maintenance work, and follow - up systems and programs in place within the courts.
- Follow up the work of the network, the server and repair errors.
- Follow-up Action Updating for all systems, peRMANent follow-up work and staff training programs and continue their work.
- Installation of software on the devices and ensuring their effectiveness (download justice and amendments on the Mobile to the judges.
- Staff training on software applications whenever the need arise (old and new) with continuous monitoring them.
- Follow all regard to court servers and network connections
- Hardware configuration and download the Windows, and all software applications and programs operating in the courts.
- Make backup copies of the necessary files.
- Run archiving own programs , demarcation and the Mizan of software and staff vacations and peRMANence and departures
- Creating the emails of some staff and the heads of court managers.
- Format for computers and software downloads.
- Administrative tasks related to the organization and distribution of the technical support team; follow up with the needs and problems of Court Administration and Management Information Systems Directorate.

## **7. Goals and Tasks of Courts Software Service:**

There are two staff members at this department, a specialist software quality and technical quality of the software. The overall objective of the department is to achieve optimal use of the software used in the courts through the supervision of providing support and technical advice to software users, solve problems related to the system, study and development of related proposals and preparation of plans to raise the level of training and performance software users in the courts.

Main tasks of this department is to deal with requests from users of MIZAN programs and other regulations in the courts with respect to MIZAN programs and try to implement perfectly without delay, manage the process of document requests from the courts and stored for easy reference when needed. In addition to that there are other tasks handled by the department are:

- Develop plans and procedures for the work of the division on the basis of ITIL V3 , which includes the best practices in the field of service, in addition to the preparation of forms and reports for the work of the department and work to develop based on any developments
- Provide advice and guidance necessary to user who use Mizan programs and other systems operating in the courts in an appropriate manner facilitates the process of understanding troubleshoot errors , with provide training where necessary
- Provide the users of programs in the courts with some guidance and evidence needed to deal with specific issues (which notes the misuse of the program).
- Identify all the problems and improvements to the Mizan Program and other systems operating in the courts, discussed with the legal entity if needed, send it to the competent authority of the system development process in order to resolve them or modify them or add them.
- Identification and classification of urgent problems that occur on the program, work on management assigned to specialists and follow up its implementation until it is resolved , in addition to informed officials in order to take a decision when necessary
- Work to develop a training plan to train existing users of the software in some courts and which meet the need for training.
- Identification of the authorities of program users and follow up the operation of Mizan program.
- Operation of new system in the courts (Rollout) within the plan to be developed by the department head. Test of the amended version of the system before they are applied in the courts (Testing).
- Collaborate with other departments in the ministry to accomplish some things concerning the implementation of these districts through a Mizan System as Judicial record, and the Directorate of Civil and others.

### **Third: Summary of Problems, Challenges, and Recommendation for human resources in information technology directorate:**

The studies showed that employees of the Information Technology Directorate facing problems and challenges while doing their job, has expressed them in the open questions in the questionnaire-mail. The aim of these questions to identify their point of view in the quality of these problems they face at work, their suggestions to address and overcome the challenges. Where employees are best problems solvers for their work. The following is a summary review of the problems and challenges and recommendations as expressed by the staff in the district in general and all the moderating:

## 1. Challenges and Problems

- The gap between job title by structural and reality from the perspective of staff of the Directorate: results of the survey showed that the majority of the staff and their proportion 70.2% of the actual job titles is technical support technicians while the percentage according to the approved structure does not exceed 36.2%. Which means that 34% engaged in technical; works are not within their functions according to the approved structural official and working in jobs outside their specialization.
- 38.3% of the respondents stated that job titles by structural approved in the Ministry of Justice of the Directorate of Information Technology are programmers, while only half 19.1% match their job titles of the structural functional as with Job Title actual. This means that half of the remaining 19.2% do not match their actual jobs with structural and don't work in the field of programming. In addition for assistant's programmers on structural their percentage is 19.1% while the actual percentage does not exceed 8.5%.
- Their job title accordance to structural for the data entry function and administrative, actually they don't practice these positions but doing other work is technical support in the field of information technology.
- Organizational structure and functions of each employee in the directorate is not implemented on the ground, and as described in official documents. This shows clearly the contrast at the level of the courts, which includes 73 employees of information technology and make up 70.9% of the total staff of the Directorate. This discrepancy leads to ambiguity and overlap in the terms of reference of work and lack of clarity of the functional responsibilities and powers, as the lead staff to do some tasks do not fall within the functional descriptions. The reason for this discrepancy is due to a lack of staff and do not match the requirements of professions according to the job description, whether in terms of degree or experience.
- There is a problem in the formulation of general goals in a document functions in official statement that issued by the Ministry of Justice, which does not differentiate in the wording between the target and the procedure, the majority general objectives of the Director of the Directorate, heads of departments and staff formulated in the form of action carried out by the heads of departments for the operation of their departments and not as a vision of the future for developing , updating , and improve performance.
- No development and modernization of tasks and job descriptions of the Directorate and departments to keep abreast of recent developments in the field of information technology and means of communication, software and steady change in work procedures.
- There are no clear tasks at the level of the Directorate and at the level of departments to supervise the permanent and continuous on the quality of the data entered into the



database, in terms of accuracy, validity and consistency of input data and the length of time binding for the automation of information and documents, and the mechanism of entry and E-Audit and field manual. The presence of an important quality control or quality control software systems used in the department of the Directorate does not cover the task of quality control data input and control over the accuracy of the data entered.

- There are clear tasks of analyzing the data in depth databases, design and statistical indicators to write reports that decision-makers use them at the central level or at the level of the Judicial Council or the courts. Where the tasks that related to the analysis of information that related to software development and don't related to the statistical analysis. Where Mizan program (2) deal with a large number of indicators and statistical data on the work of the courts, which show the efficiency and effectiveness of the judicial system, need computer skills to find high for the extraction of statistical indicators and take advantage of them.
- There are functional tasks are described in the service department courts of the Directorate of Technical Support Mizan program carried out by employees from outside the Directorate who is the liaison officer of policies and institutional development distributors in the courts and numbering to about 91 employees, carrying different certificates have nothing to do computer science in addition to that they are not full-time for these tasks.
- Hang the work in a number of the tasks described in different departments due to the resignation of the official responsible for implementation for the long-term, or an other employee who is not specialist to do it. These resignations scattered in IT staff for the intensity of competition in the labor market for attractive deals offered by the private sector compared with the public sector.
- Lack of clarity of the tasks and authorities and functional responsibilities for some staff in the Directorate of Information Technology or employees of the courts, where the majority of their work outside the framework of their duties the official commissioned by the President of the Court or any officials there in, which negatively affects his official and lost responsibilities in the event of errors.
- Sometimes staff assigned to some tasks of the Directorate in courts to perform other tasks not related to job description for his job by the heads of the courts, which is a burden on full-time employee to his job required of it. There are also some job titles that no one carried out by such a security officer and the protection of information.
- Lacks the staff of the ministry and the staff of the Directorate of Information Technology for no presence of an appropriate system of incentives based on a realistic assessment of employee performance fits with clear objectives and defined and agreed upon in advance. On the one hand, employees are evaluated by people who are not directly on the lookout for their work and using a valuation model lacks an objective measurement tools to

measure various performance elements. It also does not take into consideration the privacy of work in department of the Directorate which affects the accuracy and credibility.

- There is duplication and repetition in the tasks of systems specialists and functions of the technical regulations, where they do the same tasks relating to the collection and analysis of information to determine the needs of computer hardware and software for the operation and maintenance, as well as with respect to activate the blocking powers of the use of information technology in the ministry and the courts. This congruence lead to duplication of work and loss of time, effort and cost increase, as well as what caused internal problems resulting from work-sharing.

## **2. Recommendations**

Most of the recommendations relating to the functional tasks of the Directorate of Information Technology and its department is the need to work on the revision of job description and periodically adjusted according to the applied developments, developments and updates that are in information technology. An audit includes the study of functions that have been working out during the year, or that have not been working out, find out the reasons and light are either excluded or renew them. Here are other recommendations within this context:

- The need to create a department or a specialized unit to oversee the automatic data entry and checking quality and accuracy of manually and electronically periodically. Analysis of data for the extraction of statistical indicators that cannot be extracted by non-specialists which provides information and forward-looking correlation useful in the planning process medium and long term , especially since he is dealing with a huge database torrential indicators within Mizan program.
- Find a solution to the shortage of staff and stop implementation of the tasks described in the departments of the Directorate of Information Technology and carried out by staff from outside the directorate, because there is risks resulting from the lack of clarity of authorities and responsibilities once the work didn't performed based on the standards.
- The need to develop system that allows equivalent the staff financially who does work outside the tasks described in the job after the approval of his subordinate.
- Re- considered in the formulation of the objectives of departments of the Directorate to include vision and desired future goals for the post of Head of Department.

## **7. Problems, Challenges and Recommendations for directorate staff based on departments:**

### **7.1 Network Specialist**

#### **➤ Problems and Challenges:**

The main problems is the lack of potential for the extension of computer networks in some courts in the provinces because of the lack of the necessary infrastructure for it. In addition to that, there are several problems summarized as follows:

- Lack of funds to the Directorate of Information Technology (Department of Infrastructure) for the purchase of urgent and necessary to extend and maintain computer networks, where these materials are purchased from our own account and the ministry will be charged later and after a long time.

- Lack of several basic maintenance of networks for technical support department in the courts of first instance, in order to save time and effort together.
- lack of full knowledge of software and different operating systems due to lack of training courses.

➤ **Recommendations:**

Among other recommendations as expressed specialist networks is the need to work on the application of the network security system information within the ministry , to ensure its effectiveness to reduce piracy, to main tain the confidentiality of the information and data are stored , the follow - up to the modernization and development. As well as work on the following:

- Preparation of technical specifications for networks of information and equipment from connectors and adapters and shelving cables and other accessories , and server systems running programs and supplies and equipment server room , and information technology equipment , software and necessary for the operation and maintenance of business information systems, the ministry and the courts efficiently and effectively.
- Modernization of equipments to work.
- Give the number of courses of at least two people in the same subject to interest prevail.
- Stimulation on entrepreneurship and innovation.

## **7.2Network Technician:**

➤ **Problems and Challenges**

They face the same problems and challenges that faced network specialist which they are lack of the necessary tools to sustain work (preparing), delays in maintenance for old equipments, oldness and slowness of devices and printers. There are many problems and challenges, including:

- Poor infrastructure in the court where the electricity connections and wire networks connected to each other randomly.
- Delayed in maintenance of hardware failures, printers, and delay the work by outsourced company.
- Lack of maintenance materials and tools to work in the field of hardware maintenance
- Some of types of printers and devices are poor quality, which takes a long time during maintenance operations.
- Printers that they have are inappropriate and of poor quality, which negatively affects the printers.

➤ **Recommendations:**

- Conducting meetings to discuss work problems in the courts in terms of maintenance or where crashes linking with servers in the main center and find alternative solutions for the workflow.
- Conducting workshops regarding the court system and its problems and develop solutions and proposals.
- Prepare training courses that related to servers and networking, maintenance and new threads to keep up with technology.
- Fulfillment of the rights of employees related staff allowances and other incentives to provide functional reassurance and stability.

- Before issuing the tenders for the purchase of computers and printers they should ask technical staff to give his point of view.
- Paying difficulty of work allowances for technical support staff that commensurate with the nature of the work, what is on their shoulders of follow-up, maintenance and running of the things the courts?
- Recognition of a technical support team as job titles instead of its current unrecognized it and who does not have any bonuses or allowances.

### **7.3 Database Systems Specialist:**

#### **➤ Problems and Challenges:**

The main problems facing the specialist databases from the point of view is the lack of clarity in determining the reference to the problems. As well as unexplained mood at work and the intervention of some of the staff in the job does not respect their work.

#### **➤ Recommendations:**

- Staff views are taken seriously.
- Motivate staff (even a simple letter of thanks from (Directorate of Information Systems in particular)
- Provide staff with laptops that require their work.
- Conducting regular meetings at each department.
- Conducting integrated courses that include all the staff of the Directorate of Information Systems and documented in order to benefit from joining the Directorate later.

### **7.4 Technical Support Technician**

#### **➤ Problems and Challenges:**

Technical support staff face many problems in their fields , most of them a lack in basic equipment for some technical support staff , including computers , printers and inks , lack of powers to the technical support staff on the Mizan system . In addition to that, there are many problems summarized as follows:

- Lack of equipment necessary for the work of maintenance of devices and networks.
- Difficulty dealing with switches in terms of the difficult climb up on the stairs to detect them.
- The oldness of computers and printers and the slowness of them and small size of the memory.
- Lack of powers of (IT staff) in the courts, but when they talk with Mizan program services.
- Staff are not updated with modern technological developments for lack of enrollment in training courses specially staff of the south courts.
- The Difficulty in visiting some of our courts in terms of transportation and the dangers of the road Example (JAFR).
- Lack of sufficient capacity to solve the problems of internal networks points to the lack of spare parts.
- Non- availability of some appliances enough Example (scanners) for use in archiving.
- No Updating for staff knowledge with modern technological developments for lacking of access to training courses.

- The difficulty of dealing with electrical connections and ITS riskiness
- Dealing with different attitude of managers those use "I need it Now" style otherwise you are not doing your job.
- The current establishment of the network wires leads to a lot of problems.
- Lack of familiarity with the maintenance of devices and printers.
- Unfamiliarity with the Server breakdowns.
- Lack of necessary materials to work (such as: CDs, special equipment maintenance screwdrivers and presses Network, a broken check points .....).
- Recession, there is no real career development and the lack of training courses available and they are limited for number of staff (ex. not more than one employee can get one the course at the same time).

#### ➤ **Recommendations**

The most important recommendations that technical support staff should work on it updating computer equipment, printers, giving technical support staff powers on the Mizan program. In addition to that, the technical support staff recommends the following recommendations:

- Organize training courses in the work field.
- Participation in programming tasks
- Expanding the scope of powers for IT staff in the courts to facilitate work flow procedures.
- Conducting special courses in the work field and programming, make them accessible for south staff to join the courses because it is difficult for them to join the courses in Amman for road difficulty especially for female staff.
- Observe the life of the devices and printers.
- Providing the requirements of work
- Alleviate psychological pressure that we face from our officials in the courts.
- Conduct a periodic Meeting with the officers in the ministry to identify the problems that we face and understand the positions that we are going through and do not rush to judge us by what is heard from the President of the Computer Science Department and the Chief of Staff in our court .
- More communication between technical support staff and our managers in the ministry.
- Right people at Right place, create new job titles that connected between information system directorate needs with qualifications that fit to the work requirements, restructuring the job titles in a way that return with benefits for directorate and new real output toward best situation.
- Creating equal opportunities for attending training courses.
- Nomination of the right employee for training according to the career needs
- Creation of a special surfer for justice program that we can download the updates of judges devices.
- We should follow officially, technically and managerial in human resource models, CVs and staff data to information technology directorate.
- Official delegation for technical support team to conduct training for courts staff.
- Training for technical support team in districts once a month to discuss the most important technical problems and find solutions for them
- Providing every six months the staff with specialized training to meet applied systems needs for example A+ ,CCNA, Mail management, Server management

- Communication with directorate through periodic meetings, weekly, monthly and yearly action plan and discussing the most important challenges and problems at work field.
- Activate the feedback methodology through yearly, monthly and weekly report which is tall about the achievements of the team.
- Develop a clear vision through time plan by the Directorate of Information Technology of what is expected to be completed by the team.
- Provide good furniture for IT staff in the courts, and equipments that characterized by fast and large memory capacity.
- Conducting training courses about Oracle, Net, MCITP, Cisco
- Involvement of technical support teams in choosing the tenders, the quality of the hardware and choices for printing machines because of some differences in qualifications affect the workflow and maintenance rate which are touched by heads of teams and Employees of technical support.
- Calling technical support teams by technical support department and upgrade the team leaders to the heads of departments where the court has 40 offices, 70 device, 50 typewriter, hardware systems and integrated support functions **technician dealing with five aspects include networking and training, printers, hardware and software taking into consideration that all of them have worth designate sections of each deserved and the consequent, and administrative.**

### 7.5 Programmers

The most important and challenges are faced by programmers are the weakness of communication between programmers, head of departments, and directorate manager for lack of periodic meetings plus to work pressure that caused barriers for not doing the job in good manner, lack of staff and no coordination with other team.

### **Fort: Rehabilitation and training, the training needs of staff in the Department of information technology directorate:**

#### 1. Networks Specialists:

The results of the study showed that a specialist medium-knowledge networks handle the (Switch) and (Routers) and on how to link computers and communication with headquarters. And little knowledge of court procedures.

#### ➤ **Training courses attended by network specialists within three last years:**

Network specialists said they have received trainings and attended training sessions pertaining to their fields during the past three years are as follows:

- The e-Government program and support systems for resource management.
- Security and information protection.
- Workshop information technology unit's managers and managers of e-government units.
- MCSE
- CCNA

- Microsoft Office Project 2007 ,Managing Projects
- MCITP : Lynx Server Administrator 2010
  - Training Needs
- Training courses dealing with networks.
- **Design brochures or conduct local training courses within the Ministry Center demonstrates how to bind the courts with each other, and what servers.**
- Managing Windows Environments with Group Policy.
- Microsoft System Center Operations Manager 2007: Advanced Configuration and Administration.
- MCITP: Server Administrator2008
- ITIL Foundation Course
- MCITP: Data Administrator SQL 2008 Implementing + Main taining
- Provide specific training courses and delves into windows server 2008

## 2. Network Technician

The results of the study showed that medium-knowledge networks technicians in handling (Switch), the (Routers), how to link computers and communication with headquarters. They have the same knowledge of Windows operating systems, Server, Setup, Configuration and knowledge of how to follow the terms of the user on the master Server and deal with XP or Windows 7

- **Training courses by technicians networks:** network technicians didn't attend any sessions during the last three years, only one session is Widows 7 Upgrade
- **Training needs of technicians networks:**
- Management and Cisco hardware.
- Training courses in the field of maintenance of the Switches, Routers, maintenance of interior trim.
- Courses and networks dealing with the Switch, servers and systems
- Management Windows Server 2008 – 2012
  - configuration Storage
  - Microsoft System Center Operations Manager
  - Linux Redhat Administration

## 3. Database System Specialist:

The results of the study showed that database staff systems ranging from knowledge between medium and low in the following cases:

- Download, install and set up the database in Oracle.
- Pulling back from the database Back Up.
- Knowledge of how to restore data and settings through the backup Back Up.
- Knowledge in work procedures of the courts.
- Knowledge of design for SQL reports
- Knowledge in Stored Procedures and Packages
  - **Training courses of database system specialists: training courses attended by database systems specialist over the past three years are:**
- SQL Server Reporting services
- DBA level
- DMS Systems

- Oracle DB
- ASP.NET
- DBA \_BASICS
- SHARE POINT 2010

➤ **Training needs are the following as expressed by specialists database systems**

- How to Secure your system from Hackers system Auditing
- The methodologies that used in Analyzing and developing (Agile, MSF.
- Windows Server, setup, configuration .
- SQL Server
- Php
- SQL Reporting Services
- Knowledge of how to link computers and communication with headquartered
- Advanced courses in database administration Oracle DBA
- The basics in networking.

#### **4. Programming Specialists**

The results showed that medium-knowledge of programming professionals in areas related to the design of programming language Dot Net and programming language design programs Net and ASP, and the preparation of reports in SQL Reporting Services. Either their knowledge of judicial procedures in the courts and their relationship with work ranging from medium to low.

➤ **Training courses of programming specialists: courses attended by programming specialist during the last three years are:**

- Vb.net.
- Visual studio.net.
- Oracle developer
- Visual studio.net
- asp.net
- System Analyst
- Project Management
- ASP.NET
- DBA

➤ **Training Needs of Programming specialists**

- دورات تحليل نظم UML.
- Project Management .
- SharePoint (web design and programming .

#### **5. Technical Support Technician**

The number of technicians who expressed their opinion in the survey on the extent of their knowledge in topics related to the nature of their work in information technology amounted to 27 employees. The results showed that the vast majority of professional staff so knowledge on certain topics are medium and below. Which means that they need to train them, particularly those issues related to their work as professionals.



➤ **Training courses attended technicians are:**

- Microsoft Project 2010, Managing Projects
- Windows Server 2008
- MCTS: Windows 7 Configuration
- MCITP: Enterprise Administrator + Exchange or TMG
- MCTS .NET Framework 2.0 web Applications for (128 hours) from 15/4/2012 - 15/6/2012
- DocuWare Administration
- grade end-users skills from Windows XP/Vista to windows7
- MCSE 2003 lynx server
- Windows vista configuration
- Network Management training MCSA
- windows 7
- Mciip, MCSE ,CCNA Aspnt
- Upgrade from Windows xp to Windows 7
- MCITP : Lynx Server Administrator 2010

➤ **Training needs of Technical Support Technician**

- **Training courses in technical support and networking.**
- **Maintenance training for devices and printers.**
- **Training sessions about all server and network connections and solutions to common problems with courts serve the workflow.**
- **Give more courses about malfunctions maintenance Switch & Routers.**
- **MCITP training**
- **Need for courses dealing with server**
- **Detailed knowledge of how court network connect with main centre.**
- 
- Server format preparation
- handling with SQL for archiving
- Networks topics MCITP
- Cisco .CCNA , CCNB ,A+ training courses
- Windows 7 training
- Training about work procedures in courts, especially when they frozen some of our work in resolving problems on the scales because staff development and quality.
- Focus on Oracle database courses and programming languages which support work in the field.
- Courses for SQL and deal with it.
- Courses for handling Database & Oracle.
- Courses for the design language of Dot Net.
- Servlets.Jsp +mysql .
- Java + mysql
- Cisco course training
- MCITP COURSE TRAINING

# Annexes

The director of the Information Technology Directorate	The head of the Infrastructure Department	The head of Software Development Department	The head of the Coordination and Technical Support Department	The head of Courts Systems Service Department
<p><b>General objective:</b> Proposing policies to organize the work and develop action plans and programs to achieve the stated objectives, and to provide a channel of communication and effective coordination between the Directorate and other administrative units in the institution and supervise the implementation.</p>	<p><b>General objective:</b> Supervising the implementation of the necessary work to sustain and develop the working networks to ensure their effectiveness and meet the needs of infrastructure and electronic applications in the ministry and the courts. Moreover, supervising the implementation of a secure system for the network information within the ministry and ensure its effectiveness and maintain the confidentiality of information and important stored data.</p>	<p><b>General objective:</b> Identifying the needs of the ministry and the various courts of the information systems, automation programs and supervising the preparation and implementation. Following-up with maintenance, consulting and providing direct technical support to those systems, ensuring matching of the programs and specifications and its readiness for the implementation. Moreover, making sure of training users of information systems on the applications and programs and various databases, supervising the management and maintenance of effectiveness of the various databases in the ministry and the courts.</p>	<p><b>General objective:</b> Developing systems and mechanisms to provide technical support services to users of computers and their accessories and automated systems for the courts. Moreover, following-up with technical support and maintenance of computers and supervising the technical support technicians and rehabilitate them.</p>	<p><b>General objective:</b> Making sure of the perfect use of the programs used in the courts through the supervision of providing support and technical advice to programs users and solve problems related to the system and study and develop the related proposals. Also, preparing for training plans to develop the performance and the level of the program users.</p>
<p><b>Academic qualification:</b> A bachelor as a minimum in the field of the work/ computer science or</p>	<p><b>Academic qualification:</b> A bachelor in computer science, information systems or</p>	<p><b>Academic qualification:</b> A bachelor in computer science, information systems or programming.<sup>155</sup> <b>The experience:</b> Seven years' experience in the field of</p>	<p><b>Academic qualification:</b> A bachelor in computer science or any relevant study. <b>The experience:</b> Seven years' experience in the field of the work.</p>	<p><b>Academic qualification:</b> A first university degree at least in engineering, information technology/ information system management, communications or</p>

computer engineering. <b>The experience:</b> 12 years including 3 years working in the field of supervising.	programming. <b>The experience:</b> Seven years' experience in the field of work.	programming.		computer science. <b>The experience:</b> Holding a ITIL certificate, and five years as a head of technical support and having an experience in Mizan program.
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**The general objectives (academic qualifications and the minimum experience) for the director of the Infrastructure Department and the specialist employees as well as the technicians belong to the department.**

<b>Technicians and systems</b>	<b>Technicians/ networks and qualification</b>	<b>Security and protecting the information specialist</b>	<b>Systems specialists</b>	<b>Networks specialist</b>	<b>The head of the Infrastructure Department</b>
<b>The general objective:</b> Contributing in putting the technical standards for the operating and programming ready systems and the systems of protection and contribution in installing, operating, keeping and developing them.	<b>The general objective:</b> Assisting in designing the internal and external networks, and supervising their implementation as well as putting the needed plans to develop and keep them sustainable.	<b>The general objective:</b> The responsibility for the security and protecting the systems and the automated information of the institution.	<b>The general objective:</b> Putting the technical standards for the operating and programming ready systems, and protection systems and supervise the installing, operating, keeping and developing them.	<b>The general objective:</b> Designing the internal and external networks, and supervising their implementation as well as putting the needed plans to develop and main tain them.	<b>The general objective:</b> Supervising the implementation of the necessary work to sustain and develop the working networks to ensure their effectiveness, and to meet the needs of infrastructure and electronic applications in the ministry and the courts. Moreover, supervising the application of a security system for the information network within the ministry, and ensure their

					effectiveness and main tain the confidentiality of information and important stored data.
<b>Needed qualification:</b> A diploma in computer engineering.  <b>The experience:</b> A five years experience in operating systems and programming.	<b>Needed qualification:</b> A diploma in computer engineering or networks engineering or computer science.  <b>The experience:</b> A three years experience in networks maintenance.	<b>Needed qualification:</b> A first university degree in engineering or information technology/ managing information systems or communications.  <b>The experience:</b> A five years experience in information technology.	<b>Needed qualification:</b> A bachelor in computer engineering or programming engineering.  <b>The experience:</b> A five years experience managing and the operating systems and the programming.	<b>Needed qualification:</b> A bachelor in computer engineering or networks engineering.  <b>The experience:</b> A five years experience managing and designing the information networks.	<b>Needed qualification:</b> A bachelor in computer engineering, networks engineering, programs engineering, and information systems or computer science. A seven years experience in a related field. <b>The experience:</b> A seven years experience in a related field.

**The general objectives and qualifications and the minimum experience to the head of software development department and the staff according to the specialization:**

<b>The head of Software Development Department</b>	<b>The Systems Analyst</b>	<b>Programmer</b>	<b>Database Specialist</b>	<b>Software library technician</b>
<b>The general objective:</b> Identifying the needs of the ministry and the various courts of the information systems and software, supervising	<b>The general objective:</b> Collecting and analyzing information, drafting the needed studies to determine the needs of the ministry and the	<b>The general objective:</b> Preparing and developing the computers' software, by developing the procedures of the software's work and	<b>The general objective:</b> Database Management and main tain effective operation.	<b>The general objective:</b> Providing backups of data and systems in the ministry and courts, and making it easy to referring to

<b>The head of Software Development Department</b>	<b>The Systems Analyst</b>	<b>Programmer</b>	<b>Database Specialist</b>	<b>Software library technician</b>
preparing and Implementing them, following-up with their maintenance, consulting and direct technical support to those systems, ensuring matching the software to the standards and readiness for the application, making sure of training the users of information systems on the applications and software and various databases, and supervising the management and maintenance of the effectiveness of the various databases in the ministry and the courts.	various courts of technical information systems and software, preparing the designs for the systems to be automated and fields and software created by them, in a manner consistent with the results of the analysis of these systems, and participating in receiving and scanning of the implemented regulations (internally or externally).	designing the necessary screens and reports to meet the user's needs. Working to amend and update the existing operating software, and documenting the maps of the workflow of the software and reports.		them when it is needed, and working to renew software licenses and databases.
<b>Academic qualification:</b> A bachelor in computer science, information systems, programming or any related subject. <b>The experience:</b> A four years experience in working in the public sector or courts in related areas, and an experience in analyzing and designing information	<b>Academic qualification:</b> A bachelor in computer science. <b>The experience:</b> A five years experience in analyzing systems at least.	<b>Academic qualification:</b> A bachelor in computer science, in a specialization in programming. <b>The experience:</b> A five years experience in analyzing systems.	<b>Academic qualification:</b> A bachelor in computer science, or programming. <b>The experience:</b> A five years experience in database management.	<b>Academic qualification:</b> A diploma in computer science, or programming. <b>The experience:</b> A five years experience in a related field.

<b>The head of Software Development Department</b>	<b>The Systems Analyst</b>	<b>Programmer</b>	<b>Database Specialist</b>	<b>Software library technician</b>
systems, and controlling the quality control and managing the databases.				

**The general objectives and the minimum qualifications and experience for the head of the coordination and technical support department and the staff who belong to the department according to their specialization.**

<b>The main tasks of the Head of Coordination and Technical Support Department</b>	<b>Technical Support / coordination and training</b>	<b>The head of Technical Support Department/ Court of First Instance</b>	<b>Technician / Technical Support</b>
<b>The general objective:</b> Developing the systems and mechanisms to provide technical support services to users of computer and their accessories and automated systems for the courts. Moreover, following-up with the process of technical support and maintenance of the computers, and supervising technical	<b>The general objective:</b> Receiving maintenance requests to the department and classifying them according to their priorities and send them to the specialist field technical support technician, coordinating with the specialists in the infrastructure and software departments to solve problems that could not be solved by technical support technicians, and following up the implementation and completing the maintenance requests.	<b>The general objective:</b> Supervising the follow up of the servers at the courts. Supervising the internal network and infrastructure. Supervising the implementation of the new regulations in the courts and follow the progress of their workflow. And following-up and training the technical support technicians in the field.	<b>The general objective:</b> The overall objective of the job: implementing the preventive and curative maintenance work of the used computers in the courts according to the methodology and the specific mechanisms in main taining the computer hardware and accessories. Processing, installing and operating the new equipment related to computers and network.

<b>The main tasks of the Head of Coordination and Technical Support Department</b>	<b>Technical Support / coordination and training</b>	<b>The head of Technical Support Department/ Court of First Instance</b>	<b>Technician / Technical Support</b>
support technicians and develop them.			
<b>Academic qualification:</b> A bachelor in computer science or any related study. <b>The experience:</b> A seven years experience in any similar field.	<b>Academic qualification:</b> A diploma in computer science or any related study. <b>The experience:</b> Two years in any similar field.	<b>Academic qualification:</b> A bachelor in computer science or any related study. <b>The experience:</b> A five years experience in any similar field.	<b>Academic qualification:</b> A diploma in computer engineering, networks engineering, computer science, programming or system analysis. <b>The experience:</b> Two years experience in any similar field.

**The main tasks of the Directorate of Information Systems Management and its departments.**

<b>The main tasks for the Directorate of Information Systems Management</b>	<b>The main tasks of the infrastructure department</b>	<b>The main tasks of the software development</b>	<b>The main tasks of the coordinating and technical support department</b>	<b>The main tasks of the courts' systems service department</b>
1. Providing services related to the identification of the needed needs and requirements to prepare the infrastructure to accommodate the advanced information technology, internal networks and the Web at the level of	1. Deciding the technical needs of the necessary networks and devices for the various courts and the ministry, and sending the recommendations for the main head to provide them and designing the infrastructure for the	1. Following up the maintenance contract in coordination with the Requirements Department.	1. Following up the installation, preparation and operation of the new devices that are related to computers and the network, and ensuring the process of transferring the	Coordinating with the other directorates and departments in the ministry to achieve some work related to the work of these directorates through Mizan Program, such as the criminal record and the directorate of civil and others.



The main tasks for the Directorate of Information Systems Management	The main tasks of the infrastructure department	The main tasks of the software development	The main tasks of the coordinating and technical support department	The main tasks of the courts' systems service department
the ministry and the courts.	website.		information from the old to the new computers in case of replacing or deleting all the information from the old replaced computers, after saving copies of it according to the standards.	
	2. Setting the specifications of IT devices, maintaining the devices for the networks, and monitoring the performance of the IT web in terms of its validity and speed of the used programs and finding the appropriate solutions to develop its work.	2. Managing the database, and making periodic tests for it to ensure its effectiveness, and making maintenance as well as the necessary expansion	2. Testing the old replaced computers and find their validity to be used later on and dismiss them according to the followed procedures in the ministry.	1. Collecting some necessary information in order to develop the system, which are assisted with in the processes of addition and the development on made the system (Requirements Gathering). 2. Operating the new systems in the courts (Rollout) under a plan put by the

The main tasks for the Directorate of Information Systems Management	The main tasks of the infrastructure department	The main tasks of the software development	The main tasks of the coordinating and technical support department	The main tasks of the courts' systems service department
				head of the department. And testing the reviewed copy of the system before being applied by the courts (Testing).
	3. Evaluating the working networks in the ministry and the courts and working on ensuring their constant validity and development.		3. Keeping the computers in the ministry and the courts from viruses or damages or the different problems, and supervising the maintenance.	
2. Preparing the programs, developing the information systems, creating the necessary software and updating them to improve the quality of performance and speed with accuracy in the work. Developing the programs and systems	Following up with buying the public software licenses in the ministry and working on renewing them.	1. Deciding the nature and the structure of the needed software based on the nature and the details of the data, how to use it, the objective of having them, analyzing and designing the elements and the main required fields to be available in these software, conducting validity assessments of		

The main tasks for the Directorate of Information Systems Management	The main tasks of the infrastructure department	The main tasks of the software development	The main tasks of the coordinating and technical support department	The main tasks of the courts' systems service department
used for the automation of the processes and procedures of the courts, departments and administrative units of the Judicial Council.		the operating system and achieving the objectives.		
		2. Documenting the work of the programs and the reports, and determining the standards and criteria that should be followed in developing the program and setting the required instructions for this.		
		3. Preparing the plans and the works schedules, deciding the cost of developing the automatic systems and the software in the ministry and the courts, and the required period for this in coordination with the Departments of Networks and Technical Support.		
3. Preparing the specifications for IT hardware of computers, printers and other that	Coordinating with the directorate of the management affairs for managing the purchasing processes, and providing the different devices and	Determining the supervising procedures, designing the automatic supervising systems for the systems in the ministry and courts and ensuring the		

<b>The main tasks for the Directorate of Information Systems Management</b>	<b>The main tasks of the infrastructure department</b>	<b>The main tasks of the software development</b>	<b>The main tasks of the coordinating and technical support department</b>	<b>The main tasks of the courts' systems service department</b>
necessary for the work of the units of the Judicial Council and the regular courts of various levels and departments of the Ministry. Moreover, working on providing and distributing them in coordination with the concerned Directorate.	the necessary materials for the networks according to the adopted regulation.	implementation and effectiveness.		

Ensuring the determination of the powers for the users of the program and follow up the work of the courts on Mizan Program.	Providing the direct necessary support for all the computer users in the ministry and courts to keep the quality of the workflow of the computers and the programs, putting periodic plans to maintain the devices and the automatic programs that used to keep pace with consumers, following up the preparation of the requests in due time and following up to get them.	Designing a guidance for using for the users of the information technology on the different applications and programs, and determining the powers of each user of the different programs.	Receiving the requests of providing related to the devices and equipment and setting the technical standards for the consumer, such as ink, computer papers, networks wires and others. Moreover, working on providing it in coordination with the interested departments.	4. Operating the computers, monitoring and following up the effectiveness of their work, preparing programs for the daily and periodic maintenance and preventing them, following-up the related maintenance contracts, providing the technical support and guidance to ensure the sustainable operation and to prevent
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				stopping the daily work.
			Participating actively in developing the national e-government's program in coordination with the developing the software department and the directorate of management affairs and with the interested parties in the Ministry of Information Technology.	5. Updating, implementing and following up the national e-government program regarding the work of the ministry and the courts. Also, making sure that all requirements are met. Providing the technical support to the staff of the ministry and the courts with regarding the programs and computers. Moreover, creating a team work necessary to this objective to coordinate with quality management department and human resources development department.
		Technical management for the network in the ministry, main taining it and providing the technical support for its users in coordination with the Communication Directorate.	1. Providing the e-communication through the e-mail and internet for all the staff of the ministry, and working on training them on using the networks and e-mail in	6. Developing the website of the ministry, including the suggestion of the required suggestions for the website.

			a high effective level.	
			2. Following up with opening an account for the new staff on the in the network in the ministry, and creating a new account on e-mail for them, and following up with deactivating the e-mail accounts in the internal network in the ministry for the old ones.	
		1. Determining the technical standards for the programs and the databases that kept for the ministry and courts in coordination with the e-government unit, and in cooperation with the purchasing committee to supervise purchasing process and technical assessment.	1. Making the necessary procedure maintenance for the network as well as making the preventive maintenance periodically and working on making the network works in a high level.	7. Providing the necessary programs for the for the periodic maintenance and the anti-virus programs for the computers.
		2. Analyzing the data, designing the programs and the automatic automated reports to develop the systems to	2. Following up with implementing the maintenance contracts technically for the main computers,	

		accommodate with the work procedures in the different directorates.	the network and the operating system in coordination with the requirements department. Supplies Department.	
		<p>3. Working on controlling the quality of the systems in the ministry and the courts, and ensuring that it will meet the objective and the need for amend or update it, in coordination with the directorates and the interested administrative unites, and write periodic reports about it.</p> <p>4. Keeping backup copies of the systems and data, and making sure of keeping them in a safe place and documenting these copies.</p>		
1. Providing the necessary advice and instruction to the user regarding Mizan Program and other working program in the courts in a proper way in order to ease out the	Training the new users on the best way to use the systems and the programs, following up with the implementation and sending recommendations to develop and speed up in the performance.	5. Determining the required human staff to operate the systems and working on providing it in coordination with the Directorate of Human Resources.		8. Training the staff of the ministry and the courts on applying and using the automated programs and the various applications, and training them on the mechanisms of achieving the documents and

process of understanding, discovering the mistakes and correcting them, and providing the necessary training if needed.				correspondence s electronically, especially the ones related to the implementation of the work automated procedures.
2. Providing the users of the program in the courts with some instructions and guidance on dealing with some specific matters, where the wrong way to use the program is noted.				
3. Putting a training plan in order to train the user of the program in some courts, where it is needed.				
1. Working on limiting all the problems and developments on Mizan Program and other programs in the court, and discussing them with the legal party if it is necessary, and sending it to the		1. Conducting studies and collecting data to know the work procedures as well as the different inputs and outputs in the directorates and unites. Identifying the problems in coordination with the Institutional Policy and	Applying a security system or the information network inside the ministry and the courts, and ensuring its effectiveness to limit hachuring and to keep the confidentially and the important restored data. Also, keeping the network in the ministry secure from viruses, mistakes or failures, and supervising to fix, follow up and update	9. Keeping in touch with the users of Mizan Program and discussing the problems and difficulties that face them in using or implementing them, and then working on solving, mend , or adding them. Also, discussing the development



specialist party in developing the system in order to work on solving, mend or adding it.		Development Unit to translate theses procedures to automated programs and reports.	it.	and updating requirements according to the work's need.
2. Working on identifying and categorizing the emergent problems on the program and working on managing and referring them to the specialists and following the implementation until it is solved. And sending them to the responsible people to take a decision regarding it, when it is needed. Preparing the plans and the proper procedures for the department to work based on ITIL V3, which ensures the best work in providing the service, in addition to preparing the reports models related to the work of the department		2. Keeping the design guidance for the systems and the guidance to be used and updated based on the updating on the systems. Also, keeping a file for using the systems and software and keeping them according to the developments.		

and working on developing them, where there is any update.				
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**The main tasks of the head of the infrastructure department and the staff, the specialists and the technicians who belong to the department**

<b>The tasks of the systems technicians</b>	<b>The tasks of the networks technicians</b>	<b>The tasks of the information security protection specialist</b>	<b>The tasks of the systems specialist</b>	<b>The tasks of the networks specialist</b>	<b>The main tasks of the head of the infrastructure department</b>
Collecting and analyzing the information, preparing the necessary study drafts to identify the needs of the computers and their accessories (computers, printers, scanners and others) and the ready programs including the necessary ones for periodic maintenance and protection from the viruses in the ministry and the courts, according to the followed procedures, and sending the related recommendations to the direct director.	Implementing the extensions of computer networks and installing the related devices for the work that is performed internally, and making the necessary notation process extensions and connections used in the network and computers belong to it, and documenting the schemes of the extensions for local networks in the ministry and the various courts, and constantly updating it to meet the situation on the ground.		Collecting and analyzing the information, preparing the necessary study drafts to identify the needs of the computers and their accessories (computers, printers, scanners and others) and the ready programs including the necessary ones for periodic maintenance and protection from the viruses in the ministry and the courts, according to the followed procedures, and sending the related recommendations to the direct director.	Collecting and analyzing the information, preparing the necessary study drafts to identify the technical needs from the internal information networks in the ministry and the external networks in the courts, according to the followed procedure and sending it to the head of the department.	1. Supervising the identification of the technical needs from the information network and its equipment as well as its attachments, the computer used by the courts staff, the ready programs in the ministry and the courts in cooperation and coordination with the head of the Programming department, according to the methodology and mechanism of purchasing computer and programs, and sending the related recommendations to the head of the Information Technology Directorate.

The tasks of the systems technicians	The tasks of the networks technicians	The tasks of the information security protection specialist	The tasks of the systems specialist	The tasks of the networks specialist	The main tasks of the head of the infrastructure department
Saving the documents and files related to their work.			Conducting the necessary studies to measure the effectiveness of the computers used by the staff and their current operating systems, putting suggestions on how to develop them and increase their effectiveness in doing the work, in coordination with a specialist of controlling and check and adjust the information technology, preparing and reviewing the operating systems to fit the work requirements.		
Following up the work of importing and installing the computers used by the staff, and the computers' accessories in the ministry and the courts from the trusted suppliers , and participating in committees to testing and receiving these works to ensure that they meet the required technical				Participating to evaluate the information networks in the ministry and the courts, including the abilities of the programs and the computers for these networks.	1. Evaluating the information networks in the ministry and the courts, including the abilities of the programs and the computers for these networks, to ensure their effectiveness in performing the daily tasks in cooperation and coordination with the networks specialist. Moreover,

<b>The tasks of the systems technicians</b>	<b>The tasks of the networks technicians</b>	<b>The tasks of the information security protection specialist</b>	<b>The tasks of the systems specialist</b>	<b>The tasks of the networks specialist</b>	<b>The main tasks of the head of the infrastructure department</b>
standards.					supervising the work of developing them and update them constantly.
	Conducting the preventive and emergent maintenance for networks and their equipment and the devices, the servers' rooms, the requirements for them for the possible work to be done internally. Based on the mandate of the head of the department. Follow up the work of maintenance for the network and its requirements, devices and equipment which are implemented by outside parties, in order to ensure the security of the technical implementation and to apply the instructions of the public safety and sending related recommendations to the head of the department.		Participating in preparing the technical standards of the used computers by the staff, and its accessories and the needed programs , in coordination with the interested parties inside and outside, and in cooperation with the head of the department and under his supervision, in addition to participating in the committees to evaluate and study the technical offers to import computers and programs to the ministry and the various courts.	Conducting the necessary work to develop the working networks to ensure its effectiveness and meet the needs of the infrastructure and the electronic applications in the ministry and the courts.	2. Supervising the preparation of the technical standards for the networks and their equipment including the extensions, transferences, shelves for cables and others, the server an its operating systems and programs, the requirements and equipment of the server's room, the devices of information technology, the necessary programs to operate and keep the work of the information systems in the ministry and the courts effectively, in coordination with the interested parties inside and outside.

The tasks of the systems technicians	The tasks of the networks technicians	The tasks of the information security protection specialist	The tasks of the systems specialist	The tasks of the networks specialist	The main tasks of the head of the infrastructure department
	Participating in receiving and testing the work of the networks conducted by the ministry and the courts through outside imports to make sure that it fits the required specifications.		Working on buying the licenses for the ready programs that related to the network and fits the ministry's work, working on renewing subscription according to the standard in coordination with the Ministry of Communications and Information Technology and software librarian.	Supervising the work of the networks and installing the related devices in the ministry and the courts inside or through two external suppliers, testing and receiving these works to ensure that they meet the required specifications.	3. Supervising the work related to buying licenses for the ready programs related to the network, working on renewing its subscription according to the standard in coordination with the Ministry of Communications and Information Technology and software librarian.
				Participating in setting the technical standards for the information networks and their equipments including extensions, transformers, cables' shelves and other accessories that are necessary to operate keep the work of the information systems in the ministry and the courts effectively, in coordination	4. Following the activating and operating of the monitoring the networks systems performance, to ensure its safety and the speed of the used programs and putting suggestions to develop and operate it.

<b>The tasks of the systems technicians</b>	<b>The tasks of the networks technicians</b>	<b>The tasks of the information security protection specialist</b>	<b>The tasks of the systems specialist</b>	<b>The tasks of the networks specialist</b>	<b>The main tasks of the head of the infrastructure department</b>
				with the interested parties inside and outside and cooperating with the head of the department and under his supervision.	
		Managing, keeping and updating the strategic and policies related to the security and protecting of the information to meet the strategic if the e-government in the area of security and protecting the information. Moreover, setting the needed plans to implement the related projects.		Activating and operating a system to supervise the performance of the information networks to ensure its safety and the speed of the used programs, and finding the best solutions in coordination with a check the quality specialist and the database specialist.	5. Following the implementation of the security system in the network in the ministry, making sure of its effectiveness to limit the hachuring and keeping the saved data and information confidential, following its development and updating in coordination with a security and saving the information specialist.
Conducting the necessary work to provide electronic communications through the e-mail for all the staff of the ministry, training them on how to use it effectively based on the computer's		Implementing the projects created by the plans of developing a strategic to protect and save the information and following and keeping it, in coordination		Setting the emergency plans to restore the networks, applying the system of protecting the information networks in the ministry, keeping them protected	6. Following and implementing the system of protecting the information networks in the ministry, keeping it secure from viruses, the different damages and supervising

The tasks of the systems technicians	The tasks of the networks technicians	The tasks of the information security protection specialist	The tasks of the systems specialist	The tasks of the networks specialist	The main tasks of the head of the infrastructure department
preparation for the staff use.		and cooperation with the director of the Information Technology and under his supervision.		from viruses or any damages, and supervising processing and updating it.	processing and following updating it.
Participating in setting the technical specifications related to the computers used by the staff, their accessories and the required programs in cooperation with the interested parties from inside or outside. In cooperation with the head of the department and under his supervision. Moreover, participating in the committees to evaluate and study the advanced technical offers to provide the ministry and the various courts with the computers.		Reviewing the systems' designs while developing the projects to make sure that they meet the security policies and standards, developing and updating the security documents.		Designing and preparing the necessary schemes for the information technology networks in the ministry and courts that could be implemented internally. Supervising designing and preparing the renewed networks that could not be implemented internally.	7. Supervising the implementation of the networks' work and the providing the ministry and the courts with the computers, testing and receiving these information to make sure that it meets the required .

The tasks of the systems technicians	The tasks of the networks technicians	The tasks of the information security protection specialist	The tasks of the systems specialist	The tasks of the networks specialist	The main tasks of the head of the infrastructure department
<p>Creating the computers of the ministry and the staff and related accessories to work on the operating system-adopted by the ministry, providing those computers with available and applicable programs, which are required to meet the functional needs and powers of the users of those computers, in addition to providing necessary programs for the definition and the link between the different information technology equipment, depending on the procedure of preparing computers for the use of staff.</p>	<p>Implementing the plan of preventive maintenance for each of the information networks, their equipment of connectors and adapters and shelving for cables and other accessories of networks, equipment and main computers for the server room and supplies for the server room that needed to maintain the validity of those devices, equipment and submitted to the head of the department.</p>		<p>Creating an account for the new employees on the internal electronic network in the ministry, creating an account for them on e-mail, canceling the e-mail accounts on the internal information network of the old employees, depending on the procedure of preparing the computers to be used by the staff in coordination with specialist security and protection of information.</p>	<p>Participating in preparing the technical specifications regarding providing a new server, or developing and updating the old existing one, and the equipment and the accessories of the server's room of protection devices, air condition, electronics and others that needed to operate and keep the effective work of the information systems in the ministry and the courts in coordination with the interested parties inside and outside, and cooperation with the head of the department and under his supervision, monitoring the problems in the information networks and</p>	<p>8. Supervising the periodic emergent and preventive maintenance for the networks inside and outside, following the installation of the computers used by the staff in the ministry and the courts according to the adopted operating system, providing it with the existed and adopted programs that are necessary to meet the job requirements of the users of this network, and following up validating and hiding the powers of using the computers and the network in the ministry and the courts.</p>



The tasks of the systems technicians	The tasks of the networks technicians	The tasks of the information security protection specialist	The tasks of the systems specialist	The tasks of the networks specialist	The main tasks of the head of the infrastructure department
				their attachments, providing solutions for the users' problems caused by the damages in the network and documenting the steps of managing these networks.	
Preparing the necessary studies to measure the effectiveness of computers used by staff and current operating systems, developing proposals on how to develop and improve its efficiency and effectiveness in the performance of the work.	Inspecting and testing the equipment and the main computers periodically of the server rooms in case of emergency in the ministry and the courts, identifying the technical damages and problems and the ways to solve them, documenting the procedure and its consequences within the model of testing the main devices, depending on the procedure of preparing the main computers.		Supervising the creation of computers of the ministry staff and the related accessories to work on the operating system-adopted by the ministry, providing those computers with the available, applicable and required programs to meet the functional needs and powers of the users of those devices, in addition to providing necessary programs for the definition and the link between the different information technology equipment,		9. Supervising the determinants of the operation of the used computers by the staff, operating performance monitoring systems, security systems and protecting internal networks with their accessories and devices in the courts, and providing the necessary technical support technical support to technicians when it is needed and train them.

The tasks of the systems technicians	The tasks of the networks technicians	The tasks of the information security protection specialist	The tasks of the systems specialist	The tasks of the networks specialist	The main tasks of the head of the infrastructure department
			depending on the procedure of preparing computers for the use of staff.		
Activating and stopping the powers of using of information technology devices in the ministry and the to fit the given powers to the users of the programs and computers, and the regulations that set for the distribution of powers approved by the concerned authority, depending on the procedure of preparing computers for the use of staff.			Activating and stopping the powers of using of information technology devices in the ministry and the courts in coordination with a specialist of security and protection of information, to fit the given powers to the users of the programs and computers, and the regulations that set for the distribution of powers approved by the concerned authority, depending on the procedure of preparing computers for the use of staff.		10. Following the process of creating a new account for the new employee on the internal electronic network of the Ministry, creating an e-mail account for them, working to cancel the account on the internal information network and the e-mail accounts for the old employees in coordination with a specialist of security and protection of information, and following-up to document the steps of network management and control of information and solving its problems.
		Continuous cooperation and coordination with the department of systems of security and protection of information			11. Participating actively in the development of e-government program, in coordination with the department of program development

<b>The tasks of the systems technicians</b>	<b>The tasks of the networks technicians</b>	<b>The tasks of the information security protection specialist</b>	<b>The tasks of the systems specialist</b>	<b>The tasks of the networks specialist</b>	<b>The main tasks of the head of the infrastructure department</b>
		in the e-government program, in order to overview the developments in plans, criteria and standards relating to the security and protection of information			and administrative affairs directorate with the concerned authorities in the Ministry of Communication and Information Technology.
				Monitoring the problems on information networks and their accessories, providing solutions to the users' problems caused by the network failures, and documenting the steps of managing those networks.	12. Preparing the plans and programs of work in the department and participating in the preparation of plans and programs relating to the activities of the directorate.
					13. Preparing the procedures and instructions relating to organizing of the work of the department, working to develop it, and constantly working on developing the working methods and developing of the performance

<b>The tasks of the systems technicians</b>	<b>The tasks of the networks technicians</b>	<b>The tasks of the information security protection specialist</b>	<b>The tasks of the systems specialist</b>	<b>The tasks of the networks specialist</b>	<b>The main tasks of the head of the infrastructure department</b>
					of officials towards it.
		Submitting periodic reports relating to the security and protection of information and saving the documents, files and records relating to the work.			14. Writing periodic and non periodic reports that are required on level of achievement of the department and submit them to the director of the directorate. And identifying the problems of work and the staff in the department and take action to provide a positive working environment and evaluate their performance
Training of the staff in the ministry and the courts to use the existed automated programs applications.			Training of the staff in the ministry and the courts to use the existed automated programs applications.		15. Training the new employees to the new activities and required work of them and supervising the work of the department.

**The main tasks of the head of software development and the staff of the department according to the specialization**

<b>The head of software development</b>	<b>Systems Analyst</b>	<b>Programmer</b>	<b>Database specialist</b>	<b>Software library technician</b>
Identifying the needs of the ministry and the different courts of information systems and automated programs, according to specific mechanisms to conduct the preparation and development of programs and the automated systems in the Information Systems Directorate, in cooperation and coordination with the head of the infrastructure and writing recommendations about it for direct official.	Identifying the nature, structure and language the programs that required to be automation that are necessary to achieve the needs of the users through the study of the nature of work and the project to be automated, its requirements and the ways to use its components.	Modifying and updating the existing operating programs through receiving requests for programs maintenance, making adjustment on the screens and to meet the requirements of the new work.	Managing and main taining the effectiveness of the various databases in the ministry and the to meet the requirements of the work environment, through operating, closing and controlling of the various operating processes, activating the systems of linking major databases in the ministry and external anchor points.	
Supervising the implementation of the collection of information and documents about the regulations to be developed, modified, studied or analyzed, designing the elements and the key fields of their systems and programs, to meet the results of the systems analysis, as well as to supervising the preparation of documentation to design the systems'	Collecting and analyzing the information, drafting the necessary studies to determine the needs of the ministry and the various courts of technical information systems and automated programs, developing the automated systems and programs in the directorate of management of information systems and submit it to the direct official.	Preparing the necessary experimental data to test the programs, participating in the systems analyst to test them through testing the validity of the operation, the correctness of the programs work, and storage.		

<b>The head of software development</b>	<b>Systems Analyst</b>	<b>Programmer</b>	<b>Database specialist</b>	<b>Software library technician</b>
specifications and technical specifications necessary to implement such systems, programs and databases.				
Supervising the preparation and implementation of input programs, reports, views, updating and extraction for the systems and databases to be developed (and can be developed internally), to make sure that it follows the specifications set by the systems analysts in the department.	Developing the procedures for input, storage, processing, and adoption, transferring the data to the system that will be automated, in addition to the number of system interfaces and relations plans and linkages within the system and between different systems. Moreover, classifying of programs, input, views, reports, update and management of the system to be automated according to the requirements and needs of the user.	Preparing and developing the input programs, views, reports, updating and extraction for the systems and databases to be developed through the development of the programs work procedures, designing screens and reports necessary to meet the needs of the user, according to the technical specifications set by a systems analyst.	Monitoring the data entered on the databases that are under in his authority, and making sure they do not contain any damage or virus before the transfer, storage and distribution on the storage means and various conservation.	Saving backup copies in a safe place, making it easy to refer to and making them available when they are needed, and preparing technical reports of the work.
Preparing the necessary action plans and work programs for the development of information systems and programs in the ministry and the courts, and supervising their implementation, in collaboration with the systems analyst in the department, and in coordination with the	Participating in the preparation of the action plans and programs that are necessary to implement the programs and reports automated for the information systems, using the critical path method or Pert, determining the cost of developing these automated systems and software in the ministry and the courts, and the needed period of	Providing consulting and direct technical support for operating systems and take corrective actions to address the damage and emergency problems, and making maintenance to the programs for emergency problems.	Fitting the databases with existing operating systems and the size of the input and processing data through it, in coordination with systems specialist, and activating the emergency plan in coordination with specialist of the security and protection of information and implement them when needed.	

<b>The head of software development</b>	<b>Systems Analyst</b>	<b>Programmer</b>	<b>Database specialist</b>	<b>Software library technician</b>
departments of infrastructure and technical support.	time to implement them, collecting information and documents on the system from the users in order to determine his objective, identifying the work procedures, and the inputs and outputs of the processes used in the departments and units to be automate their procedures, and studying the economic feasibility for the construction and development of information systems according to the adopted procedure.			
Following-up documenting the maps of procedures for the functioning of the programs, reports and the steps to solve the problems in the work of the systems and procedures to modify and update the software and monitors.		Documenting workflow of the maps of procedures for the functioning of the programs, reports and the steps to solve the problems in the work of the systems and procedures to modify and update the software and monitors. Moreover, making copies of programs that are subject to change prior to the amendment, and saving documents, files and records relating to his work.		Taking daily backup copies of data and regulations of the ministry and making sure that the copy process was successful, taking backup copies of data archiving system applied in the ministry, making sure that the copy process was successful and keeping another copy of each month.
Supervising the modification and updating the existing information	Analyzing the information and the systems elements to be automated and studied using the		Designing and implementing strategies and effective action to save and copy the data entered periodically on those basis,	

<b>The head of software development</b>	<b>Systems Analyst</b>	<b>Programmer</b>	<b>Database specialist</b>	<b>Software library technician</b>
systems programs to meet the requirements of the new work, following-up the maintenance, providing the consulting and direct technical support to those systems and taking corrective actions to address the damage and emergency problems.	tools of systems analysis (Case Tools), maps of the system flow, maps of documents flow, and maps of action flow. Preparing the conceptual designs for the systems to be automated and their main fields and software formed by them, to fit the results of the analysis of these systems.		through using and activating service programs such as (EXP, RMAN) within the databases software to help distributing the data on the storage media and saving, copying, and restoring them when they are needed.	
Following-up the process of testing and receiving the implemented programs internally or externally, in order to ensure that they meet the required specifications, the possibility of use and readiness to be implemented, from the powers of the operation and the work of the programming.	Testing and receiving the implemented programs internally or externally, in order to ensure that they meet the required specifications, the possibility of use and readiness to be implemented, through testing the of the operation and the work of the programming, using the optional sample data.			Following-up the technical support technicians in the courts, where Mizan Program 1 is implemented, by sending them weekly documents revealed the backup copying process for the data logs files to ensure the authenticity of the copy process
Following-up to determine the regulatory procedures and designing automated control systems for systems in the ministry and the courts and make sure of applying it.		Implementing the controls on inputs and outputs, and working on improving it.		



<b>The head of software development</b>	<b>Systems Analyst</b>	<b>Programmer</b>	<b>Database specialist</b>	<b>Software library technician</b>
Supervising the implementation of quality control systems used in the ministry and the courts, and making sure that they achieve their desired objectives, and demonstrating the need to be modified or updated depending on the adopted action in this regard.	Control the quality of the used systems in the ministry and the courts, making sure that they achieve their desired objectives, and the need to be modified or updated in coordination with the specialist audit and quality control, the departments and the concerned administrative units, and submitting periodic reporting in this regard.		Giving the necessary powers to access different data related to them, preparing the use powers and submitting them to the head of department for approval, activating or blocking those powers centrally, and following the activation process on users' computers in coordination with the systems analyst.	
Following up the implementation of the technical management of the web site in the ministry, maintaining providing technical support to its users, in coordination with the directorate of communication.	Studying the existing information systems, putting proposals and technical recommendations necessary to develop them, according to the needs of users, in addition to the reviewing the technical and operational manuals related to the modified systems to make sure it fits with the modifications that occur on the objectives and uses of those systems and basis, in coordination with the Secretary of the software library.			
Identifying and preparing the technical specifications of the programs and databases to be built to the ministry in collaboration with systems	Designing the models and monitoring procedures that are necessary to test the information systems in the ministry and the courts, applying the test procedure, preparing technical			

<b>The head of software development</b>	<b>Systems Analyst</b>	<b>Programmer</b>	<b>Database specialist</b>	<b>Software library technician</b>
analysts and database specialist department, in coordination with the e-government unit.	reports of programming and functional mistakes experienced by those systems, and the solutions proposals for being modified, and submitting them to direct official.			
Coordinating with the Department of Supplies and Procurement, Tender Committee and receiving commissions for the implementation of procurement processes, providing the necessary hardware to build and modify the information systems and the various databases, according to the adopted system in accordance with the procedure of buying the devices and the programs.				
Making sure of training the users of information systems on the applications, programs and various databases, and providing the technical advice to the departments that use this program.	Supervising the training of users of information systems on the various applications and programs, and supervising the preparation and writing of technical manuals and operational information systems.	Participating in the training of users of information systems on the programs applications and the various technical manuals, providing technical advice, participating in the preparation of technical and operational manuals, including users'	Training the database users on how to use them, and providing them with technical advice in this regard.	

<b>The head of software development</b>	<b>Systems Analyst</b>	<b>Programmer</b>	<b>Database specialist</b>	<b>Software library technician</b>
		manual, in cooperation with the systems analyst		
Following and supervising the management and maintenance of the effectiveness of various databases ministry and the courts to meet the requirements of work in environment, including acts of operation, closure and control of the various operating processes and activating systems linking major databases in the ministry and external anchor points.	Supervising the modification and development of software systems in coordination with the specialist and audit quality control and librarian software.		Monitoring the performance of the various databases by operating programs and feedback data analysis to find the reasons for the low performance level of those bases on the required normative level, and working on suggesting and implementing of needed solutions to be addressed.	
Following-up to determine the monitoring procedures, designing automated control systems for systems in the ministry and the courts and ensuring their implementation and effectiveness.				

**The main tasks of the head of coordination and technical support department compared with the main tasks of the staff specialists and the technicians in the department**

<b>The main tasks of the Head of Coordination and Technical Support Department</b>	<b>Technical Support / coordination and training</b>	<b>The head of the Technical Support Department/ Court of First Instance</b>	<b>Technician / Technical Support</b>
1. Following the preparation of the procedures and mechanisms to provide technical support services to users of computers and their accessories and automated systems for the courts, and circulating it to the technical support technician and the field technical support technicians in courts, training them, and following up on their commitment.			
2. Determining the mechanisms of action and communication between technical support technician and technical field support technicians to ensure the effective implementation of the various tasks and processes. It has become one of the tasks of head of the infrastructure department.			
3. Supervising the implementation of emergency maintenance for computers used by employees, and their accessories (computers printers, scanners, etc ...) in the courts, according to the methodology and the specific	Receiving oral and phone maintenance requests and to the department, trying to identify and solve technical problems on the phone (if possible), and work on documenting this type of maintenance requests and the actions taken in this regard in accordance with the approved methodology.		Implementing the emergency maintenance of the computers used by employees and their accessories (computers, printers, scanners, etc.) in the courts, in accordance with the methodology and the specific mechanisms to conduct maintenance of computers and their

The main tasks of the Head of Coordination and Technical Support Department	Technical Support / coordination and training	The head of the Technical Support Department/ Court of First Instance	Technician / Technical Support
mechanisms for the maintenance of computer programs and accessories, to make sure of fixing the damages in the required speed and accuracy, and the suitability of the taken actions and the efficiency, and the effectiveness of technical support technician and field technical support technicians in the implementation.			accessories.
4. Contributing to the preparation and organizing the periodic preventive maintenance plans for information technology equipment and automated systems used in the courts, and supervising the implementation, according to the methodology and the specific mechanisms to conduct preventive maintenance of the computers in coordination with the head of regulations department and the systems analyst.	Reviewing the application forms of technical support and documented records, making developmental suggestions about it, making sure of the supply the units and directorates in the ministry and the concerned parties with computers and programs maintenance in the courts of those models and records, and following their commitment to use and fill the data according to the norm.		Participating in the preparation and organizing the periodic preventive maintenance plans for the computers used by employees as well as their accessories and automated systems used in the courts, following up the implementation of the computers and the programs in ministry, implementing the preventive maintenance work according to the plan prepared for that, implementing the emergency maintenance of used systems and programs in accordance with the methodology and the specific, preventive and periodic mechanisms to conduct programs maintenance.
		Coordinating and following-up from those involved in the software development department regarding requests for technical support for electronic programs and systems, that could not be	5. Participating in the evaluation committees, studying the technical developed offers to provide

		handled by the technical support technician, or which are still subject to the maintenance guarantee or covered by the maintenance contracts, , according to the periodic and emergent maintenance of programs.	maintenance to the information technology devices in the ministry, its facilities and the courts, and maintenance the programs in the courts and the ministry.
Following-up to the safety of the technical implementation of the maintenance services provided in maintenance contracts of information technology devices such as computers, printers, etc. in the ministry. Also, preparing the reports on the performance of suppliers of these services and submitting them to the team leader to take the appropriate action.	Checking the servers and trying to resolve their problems. Moreover, checking the development of the internal network and the infrastructure of the court and trying to solve the problems.	Receiving requests for technical support provided by the technical support technicians in the different courts, checking their to make sure that they have all the required data and signatures, registering them in the record of the technical support requests, ordering them according to their priorities, and transferring them to the competent and concerned field technical support technician in accordance with the adopted procedure.	6. Supervising the technical implementation of the maintenance services provided by the maintenance contracts for information technology devices in the courts, such as computers, printers, etc. ..., through the study of reports of the workflow on the implementation of those contracts sent by technical support technicians in the ministry, the courts and the other facilities. Moreover, reporting on the performance level of supplier companies for those services to the direct official to take appropriate action.
Processing, installing and operating of new devices and equipment that are related to the computers and the network, and making sure the process of transferring information from old to new computers in case of replacing them, and deleting all information from the old replaced computers after saving copies according to the norm.	Applying the new regulations in the courts and train the technical support staff on them.	Coordinating with the interested parties in the infrastructure department regarding the technical support requests for information technology devices that could not be fixed by the technical support technician, which is still in the maintenance guarantee or covered by maintenance contracts, according to the external maintenance.	7. Following-up on the work of processing, installation and operation of new equipment related to the computer and the network, and making sure the process of transferring information from old to the new computers in case of replacing them, and deleting all information from the

			old replaced computers after saving copies of them according to the norm.
Protecting the computers in the courts from viruses or different damages, and supervising repairing them.			8. Making sure of protecting the computers in the courts from viruses or different damages, and supervising repairing them.
			9. Following-up the evaluation of the operating information technology devices in the courts, and submitting a report on its availability in coordination with the heads of technical support teams and heads of field technical support team.
Saving documents, records and files relating to the work.		Inserting and updating records of all emergency maintenance of information technology devices in the ministry, and the details and dates of their maintenance work in coordination with the ministry's technical support technicians.	10. Supervising the development and modernization of private records of all information technology devices in the courts, the numbers and their locations and details of their own maintenance work and dates.
	Preparing the plans and programs of the department's work and participating in the preparation of plans and programs relating to the activities of the department, supervising the archiving of documents, records and files that fall within the scope of the work of the department.		11. Preparing action plans and programs of the department, and participating in the preparation of plans and programs relating to the activities of the directorate.
	Supervising the field technical support staff in the court.		12. Supervising the subordinates, implementing the tasks and activities

			of the department, according to the approved plans and programs as well as the distribution of the work between officials.
	Preparing the procedures and instructions relating to organizing the department work, working to develop it, and constantly developing the working methods, and developing the performance of officials towards it.		13. Preparing the procedures and instructions relating to organizing the work of the department, working to develop it, and constantly develop the working methods, and developing the performance of officials towards it.
	Preparing the required periodic and non- periodic reports on the level of the department achievement, and submitting them to the head of the department.		14. Preparing the required periodic and non- periodic reports on the level of the department achievement, and submitting them to the director of the directorate.
Coordinating with the technical support technician/ coordination and training in the department to develop and update records of all information technology devices in the courts, and the details of the maintenance work and the dates.	Training the technical support staff in the courts and transferring the expertise. Moreover, train the new staff to the activities and actions required of them and inform them of the work of the department.	Training of the courts staff and the ministry center on applied systems application.	15. Training of new staff to the activities and actions required of them and informing them of the work of the department.
		Saving documents, records and files relating to his work, participating in preparing guidance for users of applied systems in preparation to give it to users.	16. Supervising saving the documents, records and files that fall within the scope of the work of the department.



**Questionnaire to identify the training needs of the staff of the Directorate of Information Systems.**

**1. Personal information: (filed by all the employees):**

**Mark the appropriate number for you with (X) in the closed questions, and write on the dotted line in the open questions.**

A1	<b>The employee name:</b> .....
A2	<b>The job title according to the structure:</b> .....
A3	<b>The actual job title:</b> .....
A4	<b>The job's nature: 1. Computer networks 2. Operating systems 3. Database systems 4. Programming 5. Technical support 6. Other (specify):</b> .....
A5	<b>The work place:</b> .....
A6	<b>Gender:</b> 1. Male 2. Female
A7	<b>Age:</b> .....
A8	<b>Academic qualification:</b> 1. Diploma 2. Bachelor 3. Master or above
A9	<b>The major:</b> .....
A10	<b>Experience years at the ministry:</b> 1. Less than 3 years 2. From 3-7 years 3. More than 7 years.  <b>The experience in the work before being hired:</b> 1. Less than 3 years 2. From 3-7 years 3. More than 7 years
A11	<b>Write the main job tasks that you actually carry put?</b>  1. .... ..... 2. .... ..... 3. .... ..... 4. .... .....

	.....
A12	<p><b>Specify the training courses you have taken in the field of your job during the past three years?</b></p> <p>1. ....</p> <p>2. ....</p> <p>3. ....</p> <p>4. ....</p>

**What do you know about these topics? Mark the appropriate answer with (X) in the box in front of each paragraph and write on the dotted line, and reflect your point of view.**

**B: the training requirements for those who deal with the computers networks (maintenance)**

Number	The paragraph	Very little knowledge	A little knowledge	Medium knowledge	Great knowledge	A very great knowledge
B1	The knowledge on how to deal with (Switch)					
B2	The knowledge on how to deal with (Routers)					
B4	The knowledge on how to link the computers at the ministry and communicate with the main centre.					
B5	<p><b>Specify other topics that you need to be trained on to improve the level of your work?</b></p> <p>1. ....</p> <p>2. ....</p> <p>3. ....</p> <p>4. ....</p>					

**C: training requirements (special for those who deal with the operating systems):**

Number	The paragraph	A very great knowledge	A great knowledge	A medium knowledge	A little knowledge	A very little knowledge

C1	Knowledge of Windows Server, Setup, Configuration					
C2	The knowledge of how to follow-up the user's authority on the Server.					
C3	The knowledge of how to deal with XP or Windows 7.					
C4	The knowledge of the work procedures in the courts.					
C5	Specify other topics that you need to be trained on to improve the level of your work?  1. .... ..... 2. .... ..... 3. .... ..... 4. .... .....					

**D: training requirements (special for those who deal with the database systems):**

Number	The gap's description	A very great knowledge	A great knowledge	A medium knowledge	A little knowledge	A very little knowledge
D1	The knowledge of how to download, install and preparation of the database in Oracle					
D2	The knowledge of how to make backup copies from the database					
D3	The knowledge of how to restore the data and the					

	settings through the backup copies					
D4	The knowledge of Jamal design (SQL) for the reports					
D5	The knowledge of how to deal with SQL Server					
D6	The knowledge of the workflow in Stored Procedures and Packages					
D7	Specify other topics that you need to be trained on to improve the level of your work?  5. .... ..... 6. .... ..... 7. .... ..... 8. .... .....					

**E: training requirements (special for the programming employees):**

Number	The gap's description	A very great knowledge	A great knowledge	A medium knowledge	A little knowledge	A very little knowledge
E1	The knowledge of how to design programs using Dot Net language.					
E2	The knowledge of how to design programs using ASP. Net language.					
E3	The knowledge of how to prepare reports in SQL Reporting Services language.					
E4	The knowledge the work procedures in the courts and how it is related to					

	your work.					
E5	Specify other topics that you need to be trained on to improve the level of your work?					
	1. .... ..... 2. .... ..... 3. .... ..... 4. .... .....					

**F: Open questions (filled by all the employees):**

**F1: what are the main problems and challenges that you face in your job?**

1. ....  
.....
2. ....  
.....
3. ....  
.....
4. ....  
.....

**F2: what are your suggestions to improve the level of performance in your job?**

1. ....  
.....
2. ....  
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3. ....  
.....
4. ....  
.....

**F3: would you like to add any issue related to your job?**

1. ....  
.....
2. ....  
.....
3. ....  
.....
4. ....  
.....

